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No. 190

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A GAZETTEER OF TEXAS.—Gannett

WASHINGTON
GOVERNMENT PRINTING OFFICE
1902

UNITED STATES GEOLOGICAL SURVEY

CHARLES D. WALCOTT, DIRECTOR

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N.H.L.

A

GAZETTEER OF TEXAS

BY

HENRY GANNETT

WASHINGTON
GOVERNMENT PRINTING OFFICE
1902

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LETTER OF TRANSMITTAL.

Department of the Interior,
United States Geological Survey,
Washington, D. C., October 3, 1901.

Sir: I transmit herewith, for publication as a bulletin, the manucript of a gazetteer of Texas.

Very respectfully,

Henry Gannett,
Geographer.

Hon. Charles D. Walcott,
Director United States Geological Survey.

A GAZETTEER OF TEXAS.

By Henry Gannett.

AREA.

Texas, formerly a State of Mexico, was settled in large part by United States citizens, who, not content to live under Mexican institutions, declared their independence of Mexico in 1835. A war followed, in which by the victory of San Jacinto and the capture of Santa Anna the State practically achieved its independence, although this was never formally acknowledged by Mexico. Soon after it sought, and finally in 1845 obtained, admission to the United States. As constituted when admitted it embraced, besides its present area, the region lying east of the Rio Grande which is now in New Mexico, extending north to the forty-second parallel. Its eastern limits coincided with the western limits of the United States as laid down by the treaty with Spain in 1819. In 1848 the eastern boundary of the State was slightly extended from the west bank of Sabine River and Lake to the center of the river and lake.

In 1850 the State sold to the General Government, for the sum of $10,000,000, the region lying north of latitude 36° 30′ and west of longitude 103° as far south as the parallel of 32°, now comprised in the States of Kansas, Colorado, and New Mexico. This transfer of territory reduced the State to its present dimensions.

The present boundary line of Texas is as follows: Beginning in the Gulf of Mexico at the outlet of Sabine Lake, thence northward through Sabine Lake and up the middle of Sabine River to the point where that river intersects the thirty-second parallel, thence north along the meridian of that point of intersection to Red River, up Red River to the one hundredth meridian west of Greenwich, north on that meridian to the parallel of 36° 30′, west on that parallel to the meridian of 103° west of Greenwich, south on that meridian to the parallel of 32°, west on that parallel to its point of intersection with the Rio Grande, and thence down the main channel of the Rio Grande to its mouth.

The area of Texas is 265,780 square miles. It stretches in latitude from 26° to 36° 30′, and in longitude from 93° 30′ to 106° 30′. In altitude it ranges from sea level to 9,000 feet in the summits of the western mountain ranges.

TOPOGRAPHY AND DRAINAGE.

The eastern two-thirds of the State is a plain, mainly with a rolling surface, sloping gently toward the southeast, and ranging in altitude from 2,000 feet to sea level. Between the one hundredth and one hundred and first meridian the land rises, in some places quite abruptly, to a plateau known as the Llano Estacado. This plateau, which has an altitude ranging from 2,500 feet in the south to more than 4,000 feet in the north, has an extremely level surface, upon which are few flowing streams. It extends westward nearly to Pecos River and is succeeded beyond that stream by a region consisting of an alternation of irregular mountain groups and ranges alternating with broad, desert valleys, most of which are without outlet.

The average altitude of the State is 1,700 feet. The area is distributed in altitude as follows:

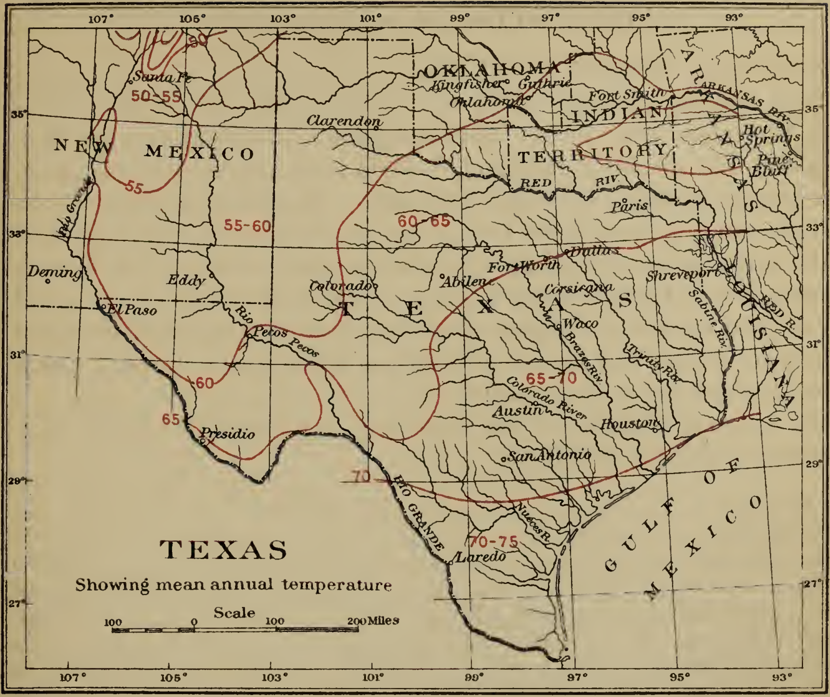
	Square miles.
0 to 100 feet	23,000
100 to 500 feet	58,400
500 to 1,000 feet	39,380
1,000 to 1,500 feet	19,800
1,500 to 2,000 feet	22,200
2,000 to 3,000 feet	44,100
3,000 to 4,000 feet	26,100
4,000 to 5,000 feet	29,800
5,000 to 6,000 feet	2,000
Over 6,000 feet	400

Of the entire area 45 per cent is below 1,000 feet; 16 per cent between 1,000 and 2,000 feet; 17 per cent between 2,000 and 3,000 feet, while 22 per cent is above 3,000 feet.

The eastern part of the State is well watered by numerous streams, the principal of which are the Sabine, Neches, Trinity, Brazos, Colorado, Guadalupe, Nueces, and upon the Mexican boundary the Rio Grande. Upon the north of the State flows Red River, which heads in the Staked Plains, while across the Panhandle flows the Canadian River, a branch of the Arkansas. The western part of the State is scantily watered by the Rio Grande and its main branch, the Pecos. Most of the smaller streams flowing into these two rivers are dry during the greater part of the year.

CLIMATE.

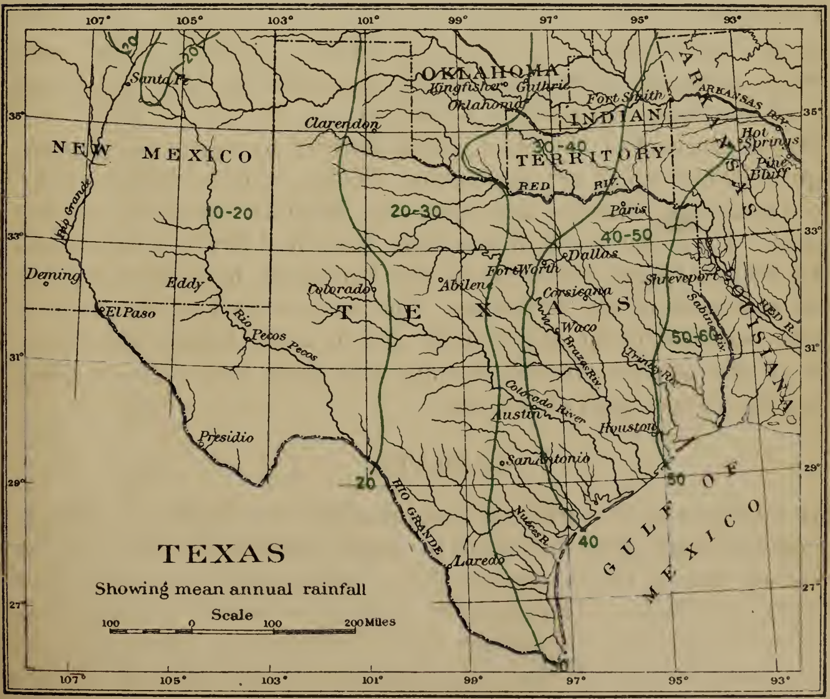
Stretching over 13 degrees of longitude and 10½ degrees of latitude the State presents great variations in climate, ranging from that of the Tropics to that of the Temperate Zone and from excessive rainfall to very arid conditions. The mean annual temperature in southern Texas is about 75 degrees, from which it diminishes to 55 degrees in the Panhandle of northern Texas. The rainfall is heaviest in the eastern



TEXAS

Showing mean annual temperature

A



TEXAS

Showing mean annual rainfall

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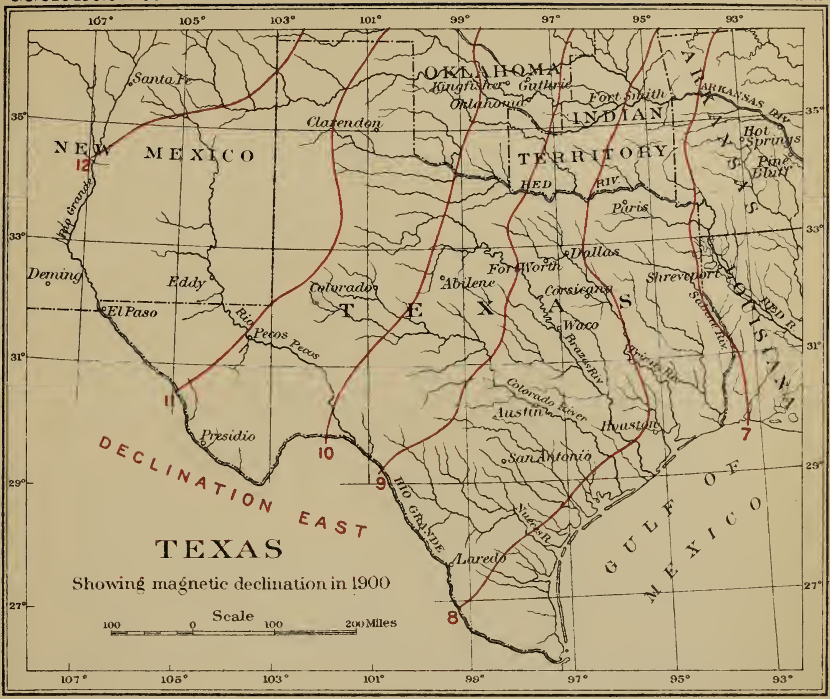

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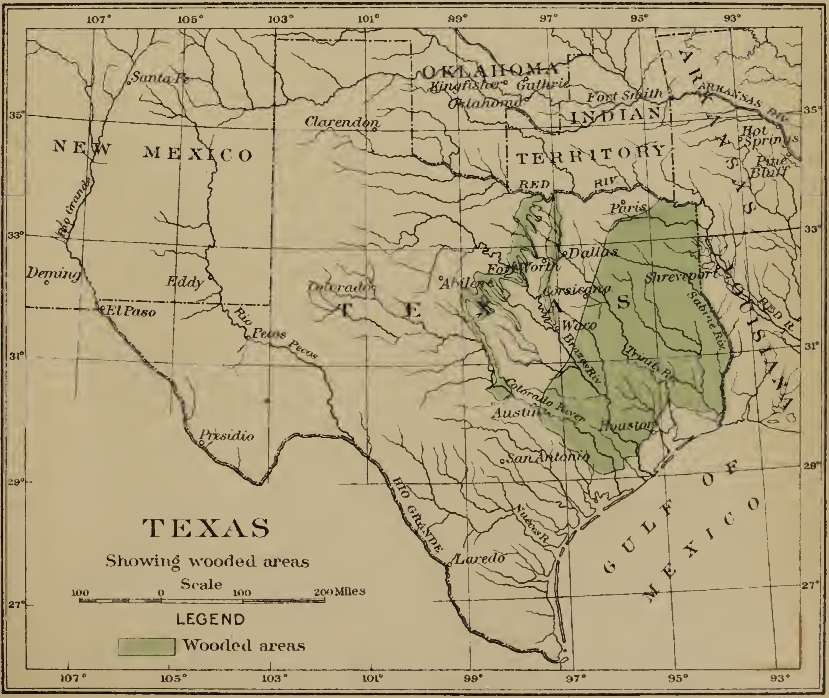

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part of the State, where it exceeds 50 inches annually, and diminishes progressively westward, the average being only 10 inches annually in the neighborhood of El Paso, in the western part of the State. The line of 20 inches of annual rainfall, which is the approximate limit of agriculture without irrigation, follows closely the foot of the Llano Estacado. The rain which falls in the eastern half of the State comes mainly, if not entirely, from the Gulf of Mexico, and descends most abundantly in the winter months, while that which descends upon the western part is derived mainly from the Pacific Ocean and comes largely in the summer.

FORESTS.

Pl. III, B, shows in a general way the distribution of the forests of the State. The northeastern part is covered with forests of yellow pine, which are composed mainly of the short-leaved species, and which are valuable for lumber. West of this body two projections of woodland enter the State from Indian Territory and run far southward into it. These are known as the Upper and Lower Cross Timbers. The timber consists of black-jack and post oak, which has no lumber value, but is used only for firewood and other minor purposes. The western and extreme southern parts of the State, except the higher mountain summits, are entirely devoid of tree growth with the exception of mesquite, which in some localities, as in the neighborhood of San Antonio, grows to arborescent size. The Llano Estacado is timberless.

EXPLORATION AND SETTLEMENT.

The exploration of Texas began shortly after the occupation of Mexico by the Spaniards under Cortez. The well-known expedition of Coronado is believed to have crossed the Panhandle and to have journeyed in a northeasterly direction to Kansas or Nebraska. The earliest settlers within the limits of the State came from Mexico. Between 1820 and 1835 many citizens of the United States entered Texas from the northeast and established themselves within its limits. The Texas revolution was engineered and the war for its independence was fought by these settlers from the United States.

Shortly after Texas was admitted to the Union exploration began. The exploring expeditions were in charge of officers of the United States Army and were for the purpose of learning the resources of the country and discovering feasible railroad routes across the continent. By these parties the State was traversed in numerous directions and its principal topographic features were mapped.

The subdivision of Texas lands has not resulted in the production of maps of much value. The coast line has, however, been mapped by the United States Coast and Geodetic Survey, and since 1884 large areas in the central and western portions of the State have been mapped by the Geological Survey. These areas altogether aggregate 57,000 square miles, or more than one-fifth of the area of the State.

POPULATION.

The population of Texas in 1900 was 3,048,710, an increase of 813,187, or 36.4 per cent, during the preceding ten years. The following table gives the population at each census since 1850, the latter date being that of the first census taken after the admission of Texas to the Union:

Population of Texas at each census since 1850.

1850	212, 592
1860	604, 215
1870	818, 579
1880	1, 591, 749
1890	2, 235, 523
1900	3, 048, 710

The average density of population in 1900 was 11.6 per square mile. The density, however, differs greatly in different parts of the State, being greatest in the central portion, while in the western part and upon the Staked Plains there is less than one inhabitant to the square mile.

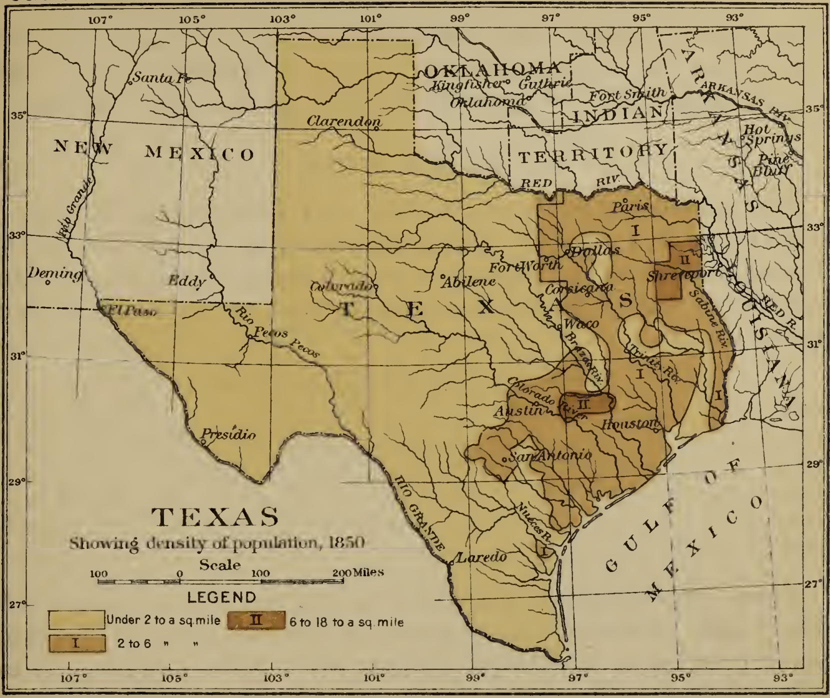
In 1900 there were 16 cities having a population exceeding 8,000 each. The total number of inhabitants in these cities was 343,870, which may be regarded as the urban population. This constituted 11.3 per cent of the total population of the State. The population of the principal cities in 1900 was as follows:

Population of principal cities.

San Antonio	53, 321
Houston	44, 633
Dallas	42, 638
Galveston	37, 789
Waco	26, 688
Fort Worth	26, 688
Austin (the capital)	22, 258
El Paso	15, 906

The population was divided as regards sex in the proportions of 51.8 per cent males to 48.2 per cent females. As regards race the population was composed of 79.7 per cent whites and 20.3 per cent negroes. The foreign born constituted 5.9 per cent of the total population, a proportion unusually large for a Southern State and due to the fact that it includes a portion of the frontier.

Persons unable to read constitute 10 per cent of the total population. These illiterates were in large part negroes. The proportion of



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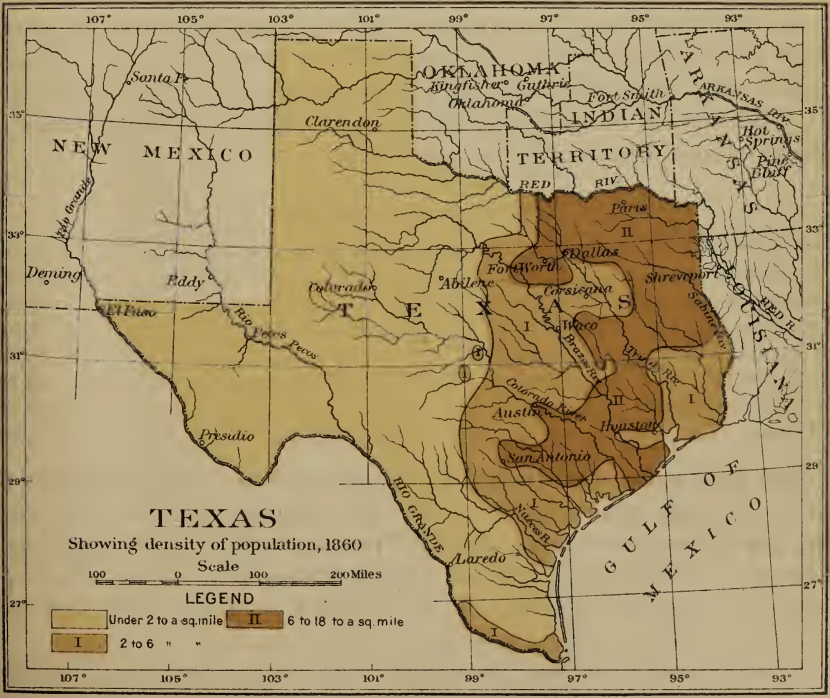

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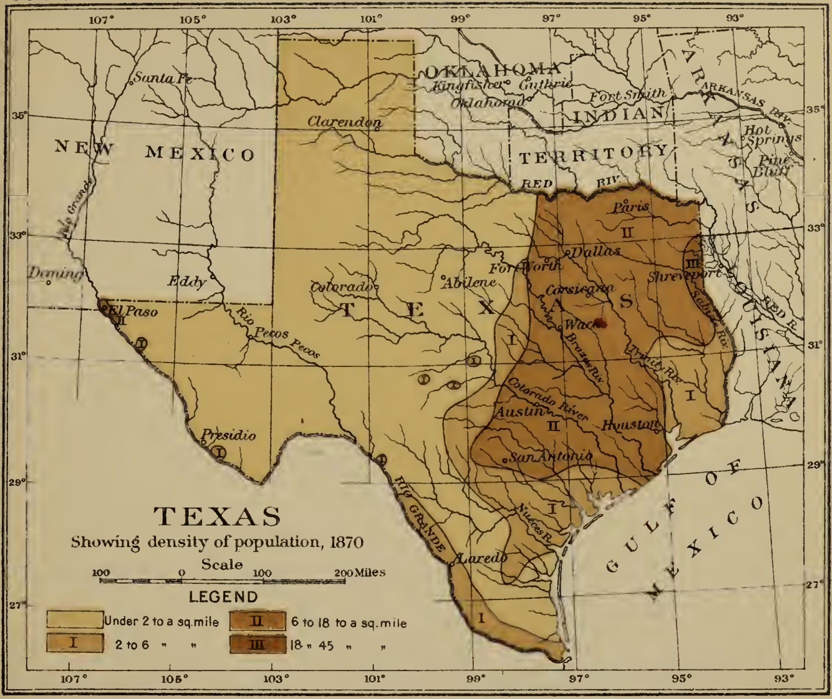

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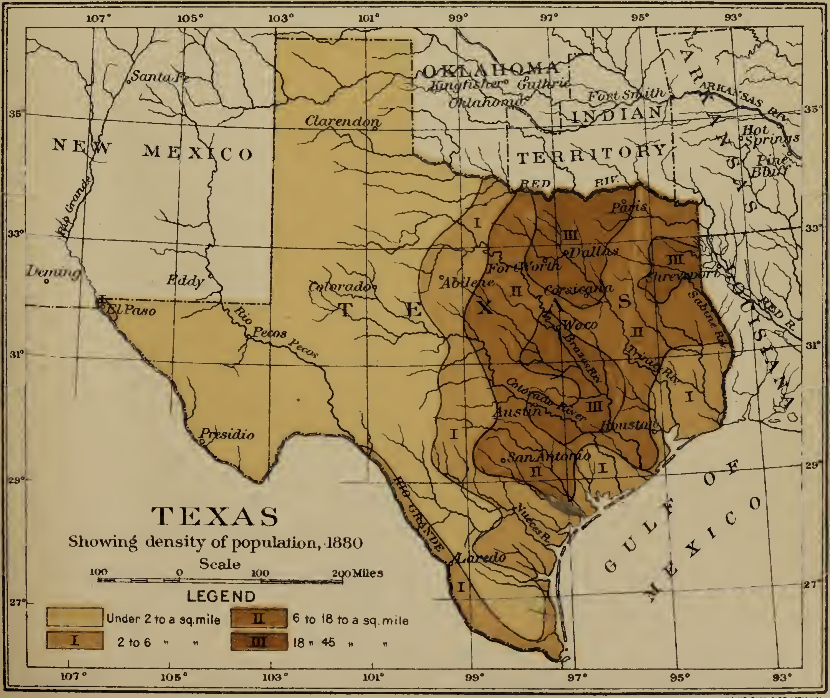

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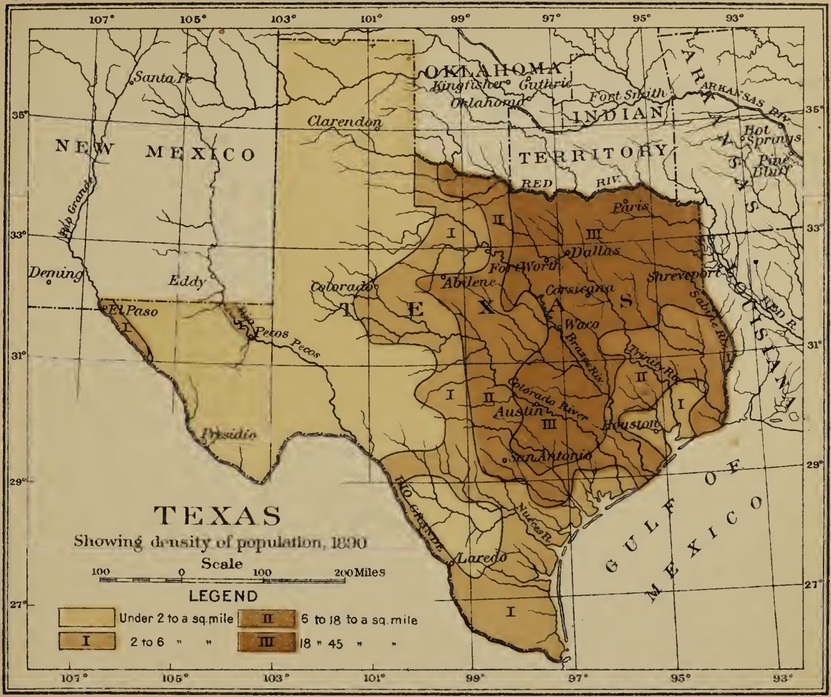

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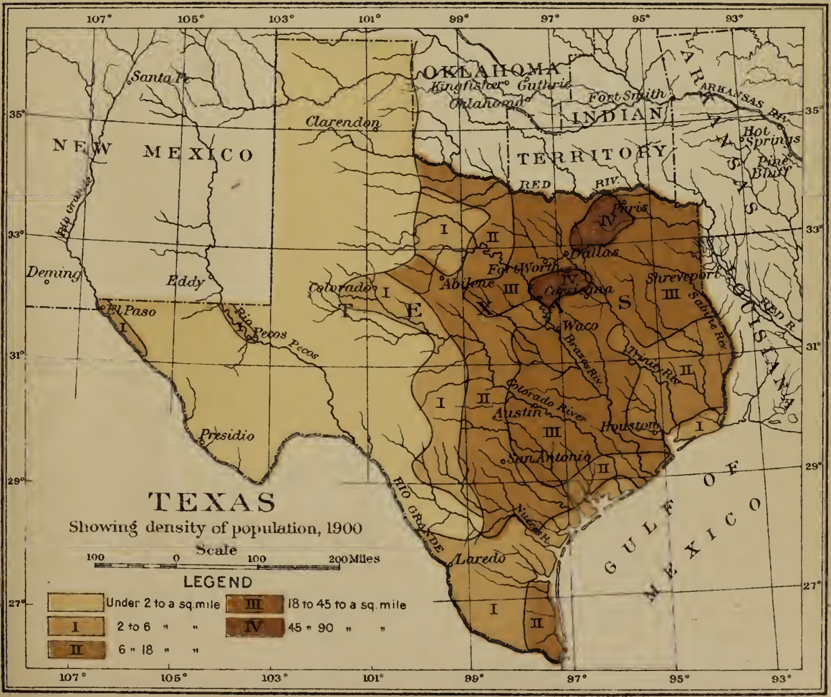

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illiterates among this race constituted 27 per cent of the total number of negroes, while of the total number of whites only 6 per cent were illiterates.

For many years Texas has maintained a good system of public schools, including graded schools, high and normal schools, and a university, the latter located at Austin. The following are figures illustrating the extent of the system of graded schools:

School statistics.

Number of pupils enrolled	552, 503
Average attendance	370, 055
Days of school	111
Number of teachers	14, 989
Total amount of salaries	$4, 030, 188
Total expenditure for schools	$4, 476, 457
Average amount expended per enrolled pupil	$7. 25

The following table shows separately figures concerning the public and private high schools and normal schools:

Statistics of public and private high schools.

	Public high schools.	Private high schools.	Normal schools.
Number	201	64	9
Teachers	516	287	51
Pupils	12, 945	4, 619	1, 154

The following are the statistics regarding the colleges of the State:

College statistics.

Number	16
Number of professors and teachers	236
Preparatory students	1, 861
Collegiate students	1, 759
Graduate students	25
Annual income	$302, 833

Of the total population 34 per cent were engaged in gainful vocations. Classifying these wage-earners the result is as follows:

Classification of wage-earners.

	Per cent of total.
Agriculture	62
Manufactures	8
Trade and transportation	11
Personal service	15
Professions	4

From the above it appears that agriculture is foremost among the vocations of the people and consequently is the most important industry.

INDUSTRIES.

In 1900 the number of farms in the State was 352,190, and the area included in them 125,807,017 acres; the average per farm was 357 acres, showing a great increase in the average size of the farm. The total area of improved land was 19,576,076 acres, or 11.5 per cent of the total area of the State. The average size of the cultivated area per farm was 6 acres.

Owing to its wide range of climate the agricultural products of Texas are varied. In the eastern and central parts the principal crop is cotton, although corn and wheat also are produced in large amounts. In the west the principal industry is the raising of sheep. The following table shows the principal farm products of the State:

Principal farm products.

Corn	bushels	109,970,350
Wheat	do	12,266,320
Oats	do	24,190,668
Potatoes	do	1,342,316
Hay	tons	1,494,305
Cotton	bales	2,584,810

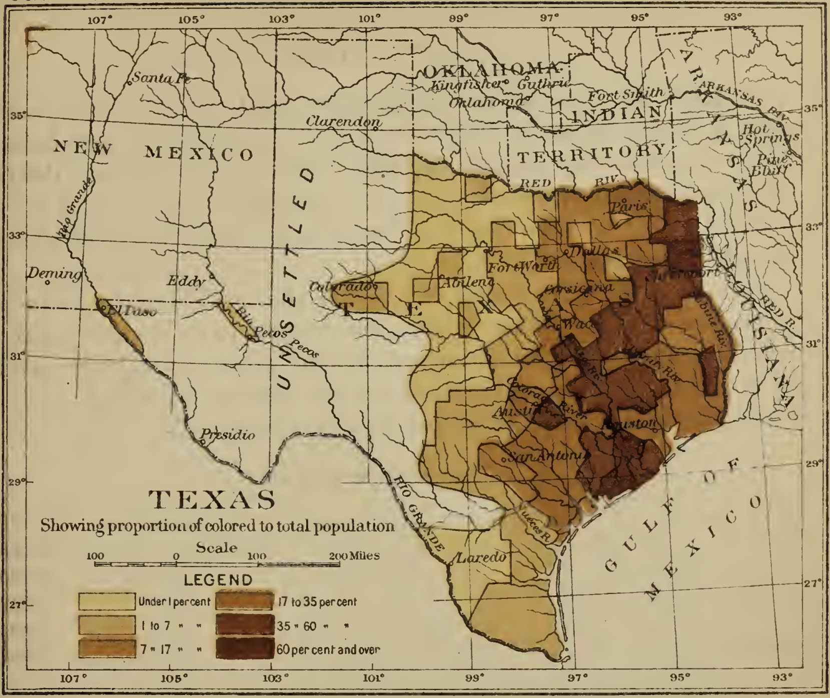
The following table shows the number of live stock:

Statistics of live stock.

Horses	1,269,432
Mules	507,281
Milch cows	861,023
Beef cattle	8,567,173
Sheep	1,439,940

The manufactures of the State are not of great importance. In 1900, however, there were 12,289 manufacturing establishments, with a total capital of $90,433,882. The employees of these establishments numbered 48,152, and there was paid to them in wages $20,552,355. For raw materials was expended $67,102,769, and the products had a value of $119,414,982.

Heretofore mining in the State has never been of great importance, but it is rapidly pushing to the front. Iron ores have been mined in the northeastern part of the State for several years. These are abundant, but of low grade. Coal has been found in several localities, but is nowhere mined on a commercial scale. Deposits of cinnabar have been discovered in the western part of the State, but the mines have not reached the producing stage. Gold, silver, and lead are found in few localities, but the product is of insignificant importance. Petroleum was discovered in 1900 in the southeastern part of the State, the initial discovery being made at Beaumont, and this discovery promises to become one of great importance.



TEXAS

Showing proportion of colored to total population

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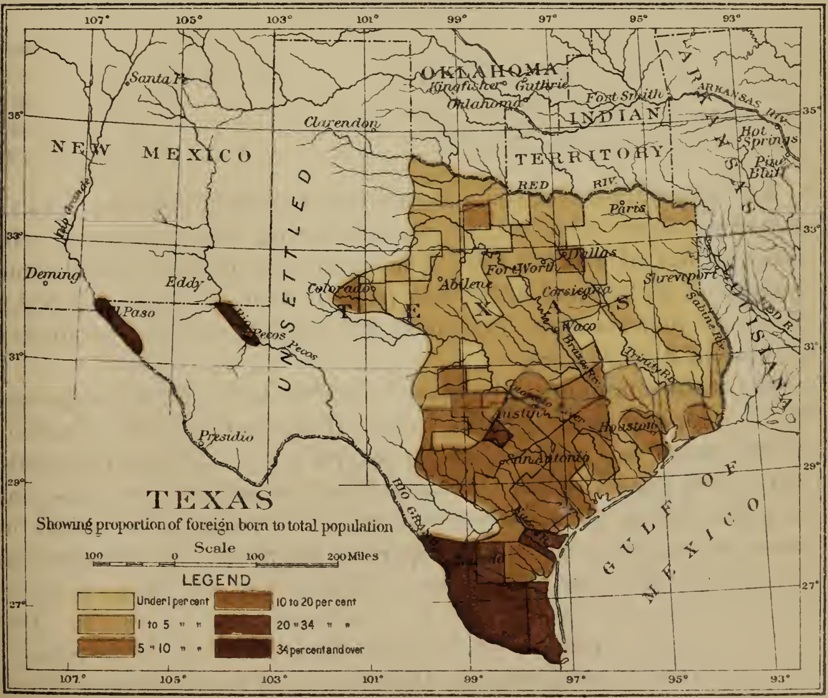

TEXAS

Showing proportion of foreign born to total population

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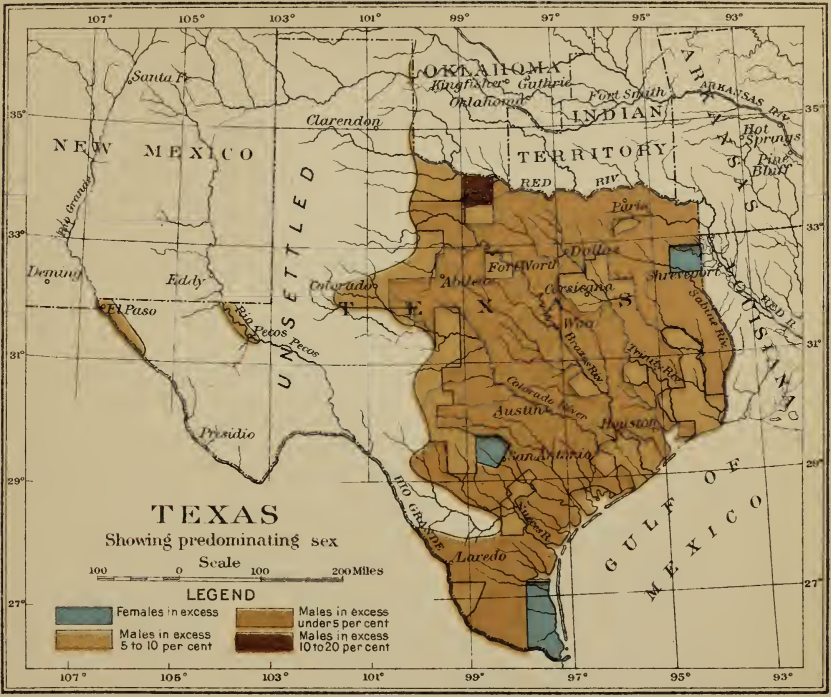
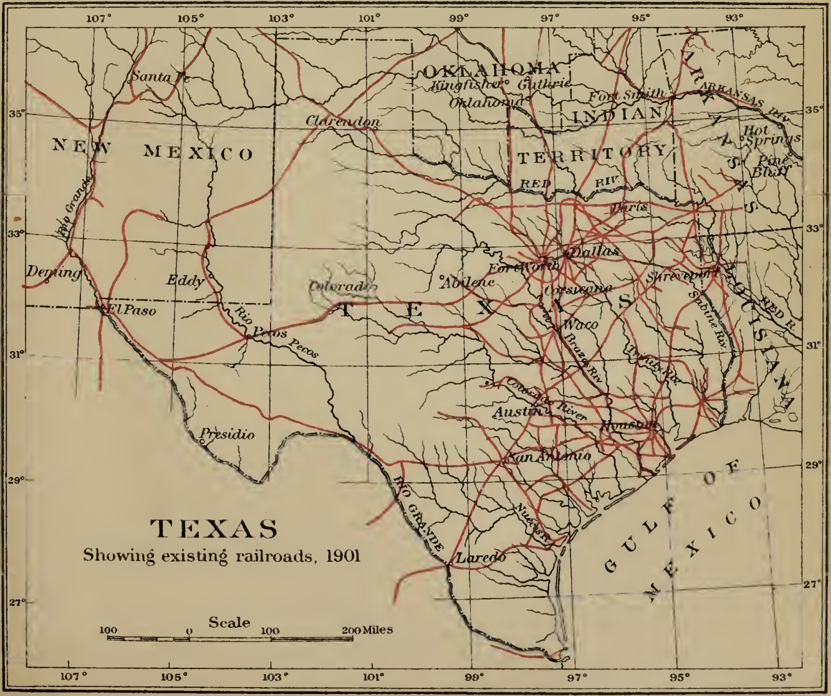

TEXAS
Showing predominating sex
Scale
100 0 100 200 Miles
LEGEND
Females in excess
Males in excess under 5 per cent
Males in excess 5 to 10 per cent
Males in excess 10 to 20 per cent
107° 105° 103° 101° 99° 97° 95° 93°
35° 33° 31° 29° 27°
NEW MEXICO
UNSETTLED
OKLAHOMA
INDIAN TERRITORY
ARKANSAS
LOUISIANA
TEXAS
GULF OF MEXICO
Santa Fe
Clarendon
Kingfisher
Guthrie
Oklahoma
Fort Smith
Hot Springs
Pine Bluff
Paris
Dallas
Fort Worth
Shreveport
Abilene
Colorado
Corsicana
Waco
Deming
Eddy
El Paso
Pecos
Presidio
Austin
Houston
San Antonio
Laredo
Rio Grande
Rio Pecos
Red Riv.
Arkansas Riv.
Red R.
Sabine Riv.
Trinity Riv.
Brazos Riv.
Colorado River
Nueces R.

A


TEXAS
Showing existing railroads, 1901
Scale
100 0 100 200 Miles
107° 105° 103° 101° 99° 97° 95° 93°
35° 33° 31° 29° 27°
NEW MEXICO
OKLAHOMA
INDIAN TERRITORY
ARKANSAS
LOUISIANA
TEXAS
GULF OF MEXICO
Santa Fe
Clarendon
Kingfisher
Guthrie
Oklahoma
Fort Smith
Hot Springs
Pine Bluff
Paris
Dallas
Fort Worth
Shreveport
Abilene
Colorado
Corsicana
Waco
Deming
Eddy
El Paso
Pecos
Presidio
Austin
Houston
San Antonio
Laredo
Rio Grande
Rio Pecos
Red Riv.
Arkansas Riv.
Red R.
Sabine Riv.
Trinity Riv.
Brazos Riv.
Colorado River
Nueces R.
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The lumber in the State of Texas is of great and growing importance, although at the present rate of cutting it is probable that the forests will be greatly depleted in the near future. During the year 1900 the cut of lumber amounted to 1,232,404 M feet B. M.

LANDS AND SURVEYS.

When Texas became a State of the Union it retained not only jurisdiction but ownership of its public lands, and it has disposed of them as it chose. In its methods of surveying it has not carried out a consistent system, as has the United States with its lands, but has divided up the lands into lots of varied sizes and shapes and with the utmost irregularity. Like the United States it has used its lands to foster the construction of railroads and to aid in the maintenance of common schools and the university. It has parted title to all its lands, retaining control, however, of the school lands, most of which, lying in the western, arid part of the State, have been leased for grazing purposes. The last of its lands, consisting of 3,000,000 acres, situated in the western part of the Panhandle, were deeded to private parties in exchange for the construction of the State capitol.

The State is divided into 243 counties.

RAILROADS.

Although Texas contains 9,722 miles of railroad, only a small portion of the State can be said to be well connected by railway lines, and, taking the State as a whole, the development of this form of transportation is in a very incomplete condition. The northeastern portion of the State, between Fort Worth and Texarkana, and a strip of territory between Fort Worth and Galveston are fairly well intersected by railroads, but elsewhere this means of communication is scanty.

GAZETTEER.

	Atlas sheet.
Abbey; bend in Brazos River in Hood County	Granbury.
Abbott; village on Missouri, Kansas and Texas Railroad in Hill County	Waco.
Aberdeen; post village in Collingsworth County.	
Aberfoyle; post village in Hunt County.	
Abilene; city on Texas and Pacific Railroad, the county seat of Taylor County; population, 3,411	Abilene.
Abner; post village in Kaufman County.	
Acme; post village in Hardeman County.	
Acona; post village in Guadalupe County.	
Acton; post village in Hood County	Granbury.
Ada; post village in Montgomery County.	
Adams; branch, a small right-hand branch of Pecan Bayou	Coleman. Brownwood.
Adamsville; post village in Lampasas County.	
Addicks; post village in Harris County.	
Addran; post village in Hopkins County.	
Adell; post village in Parker County.	
Adhall; post village in Milam County.	
Adieu; post village in Jack County.	
Adina; post village in Lee County.	
Adkins; post village in Bexar County.	
Admiral; post village in Callahan County.	
Adobe Walls; post village in Hutchinson County.	
Adullam; post village in Mason County.	
Advance; post village in Parker County.	
Afra; post village in Scurry County.	
Afton; post village in Dickens County.	
Agee; post village in Hamilton County.	
Agistha; post village in Gregg County.	
Agnes; village in Parker County	Weatherford.
Agua De Fuera; right-hand branch of Chacon Creek, tributary to Nueces River	Brackett.
Aguilares; post village in Webb County.	
Aguja; peak in Presidio County; elevation, 5,981 feet	Shafter.
Aken; post village in Shelby County.	
Alacan; bay on the coast of southern Texas, behind Padre Island.	
Alameda; village on Leon River in Eastland County	Eastland.
Alamita; creek, a left-hand branch of Rio Grande	Marfa. Alpine. Shafter.
Alamito; village in Presidio County	Shafter.
Alamo; creek, left-hand branch of Rio Grande in Presidio County.	

	Atlas sheet.
Alamo; village in Presidio County	Shafter.
Alamo Mills; post village in Cass County.	
Alarm; creek, a right-hand branch of Bosque River	Stephenville.
Alba; post village in Wood County.	
Albany; city and county seat of Shackelford County on Texas Central Railroad, and on north fork of Hubbard Creek; population, 857 (1890)	Albany.
Albert; post village in Gillespie County.	
Albion; post village in Red River County.	
Alderbranch; post village in Anderson County.	
Aldine; post village in Harris County.	
Aledo; village on Texas and Pacific Railway, in Parker County	Weatherford.
Aleo; post-office in Collin County.	
Alexander; village in Erath County, on Green Creek, and on Texas Central Railroad; population, 381 (1890).	
Alexander; creek, a right-hand branch of Leon River	Hamilton.
Aley; post village in Henderson County.	
Alfalfa; post village in Ochiltree County.	
Algoa; post village in Galveston County.	
Alice; post village in Nueces County.	
Alief; post village in Harris County.	
Alkali; creek, a right-hand tributary of Clear Fork of Brazos River	Roby.
Allamoore; post village in El Paso County.	
Allardale; post village in Newton County.	
Allen; post village in Collin County.	
Allen; left-hand branch of Scrugan Branch, tributary to West Fork of Trinity River	Fort Worth.
Allenfarm; post village in Brazos County.	
Alley; creek in Lee County	Bastrop.
Alleyton; town of Colorado County; population, 351 (1890).	
Alliance; post village in Hunt County.	
Alligator; creek, a left-hand branch of San Gabriel River	Taylor.
Alma; post village in Ellis County.	
Almeda; post village in Harris County.	
Almira; post village in Cass County.	
Almont; post village in Bowie County.	
Alpha; post village in Dallas County.	
Alpine; city and county seat of Brewster County on Southern Pacific	Alpine.
Alsa; post village in Van Zandt County.	
Alsdorf; post village in Ellis County.	
Altair; post village in Colorado County.	
Altaloma; post village in Galveston County.	
Althea; post village in Bell County.	
Altman; post village in Erath County.	
Alto; village of Cherokee County; population, 210 (1890).	
Altoga; post village in Collin County.	
Altonia; post village in San Augustine County.	
Altoyac; bayou, a left-hand branch of Angeline River in east Texas.	
Alum; creek, a left-hand branch of Colorado River	Bastrop.
Alum Creek; village on Alum Creek in Bastrop County	Bastrop.

Atlas sheet.

Alvarado; city of Johnson County; population, 1,342.

Alvin; town of Brazoria County; population, 986.

Alvord; town of Wise County; population, 560 (1890).

Amarillo; county seat of Potter County; population, 1,442.

Ambia; post village in Lamar County.

Amelia; post village in Jefferson County.

Ames; post village in Coryell County.

Amicus; post village in Marion County.

Ammansville; post village in Fayette County.

Amphion; post village in Atascosa County.

Ample; post village in Haskell County.

Amsterdam; post village in Brazoria County.

Amy; post village in Delta County.

Anacacho; summit in Anacacho Mountains; elevation, 1,349 feet .... Brackett.

Anacacho; mountains in Kinney County, southern Texas..... Brackett.

Anahuac; post village in Chambers County.

Anaqua; post village in Victoria County.

Anchor; post village in Brazoria County.

Anchorage; post village in Atascosa County.

Ander; post village in Goliad County.

Anderson; county seat of Grimes County.

Anderson; a northeastern county, with an area of 1,060 square miles and an altitude ranging from 250 to 500 feet. The population was 28,015; the county seat, Palestine. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 40 inches, and mean annual temperature 66°. The county is traversed by the International and Great Northern Railroad.

Anderson Mill; village on Cypress Creek in Travis County ... Austin.

Andice; post village in Williamson County.

Andrews; post village in Wood County.

Andrews; a northwestern county, with an area of 1,591 square miles and an altitude of 3,250 feet. The population was 87. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 15 inches, and mean annual temperature 59°.

Andy; post village in Cherokee County.

Angelina; a southeastern county, with an area of 880 square miles and an altitude of 250 feet. The population was 13,481; the county seat, Lufkin. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 52 inches, and mean annual temperature 68°. The county is rolling and timbered, and is traversed by the Pecos and Northern Texas; Houston, East and West Texas; St. Louis Southwestern railways.

Angelina; post village in Angelina County.

Angelina; river, an eastern branch of Neches River in east Texas.

Angleton; county seat of Brazoria County.

Angoria; village on Texas and Pacific Railroad in Palo Pinto County .... Palo Pinto.

Angus; post village in Navarro County.

	Atlas sheet.
Anhalt; post village in Comal County.	
Anna; post village in Collin County.	
Anneta; village in Parker County on Texas and Pacific Railway	Weatherford.
Anneville; post village in Wise County.	
Annona; town of Red River County; population, 267 (1890).	
Anson; county seat of Jones County; population, 495 (1890)	Anson.
Antelope; post village in Jack County.	
Antelope; creek, a left-hand tributary to Colorado River	Sweetwater.
Antelope; creek, a right-hand branch of Colorado River	Brady. San Saba.
Antelope; creek, a small right-hand branch of Clear Fork of Brazos River	Albany.
Antelope; gap in Lampasas County	Lampasas.
Antelope; hills in Shackelford County	Albany.
Antelope Gap; post village in Mills County.	
Anthony; post village in Fannin County.	
Antioch; post village in Houston County.	
Apolonia; post village in Grimes County.	
Apple; creek, a small right-hand branch of Red River in northeast Texas.	
Appleby; post village in Nacogdoches County.	
Apple Springs; post village in Trinity County.	
Aquilla; post village in Hill County on Texas Central Railroad.	
Aquilla; creek, a left-hand branch of Brazos River	Cleburne. Waco.
Aragon; village on Southern Pacific, in Presidio County	Marfa.
Aransas; a southern county with an area of 295 square miles. The population was 1,716; the county seat, Rockport. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 40 inches, and mean annual temperature 70°. This county is situated on the Gulf of Mexico and is traversed by the San Antonio and Aransas Pass Railway.	
Aransas; river of southern Texas flowing into Copano Bay.	
Aransas; pass, the entrance to Aransas Bay.	
Aransas; bay protected by a low sand bar, known as St. Joseph Island.	
Aransas Pass; post village in San Patricio County.	
Arbala; post village in Hopkins County.	
Arcadia; post village in Galveston County.	
Archer; a county in north central Texas, with an area of 960 square miles and an altitude ranging from 1,000 to 1,200 feet. The population was 2,508; the county seat, Archer City. The mean magnetic declination in 1900 was 8° 05′. The mean annual rainfall is 30 inches, and mean annual temperature 63°. The county is rolling, and is traversed by the Wichita Valley Railway.	
Archer; the county seat of Archer County.	
Arcola; post village in Fort Bend County.	
Ardath; post village in Collin County.	
Arenosa; creek, a small tributary of Matagorda Bay.	
Arenosa; creek, a right-hand intermittent branch of Chacon Creek, tributary to Nueces River	Brackett.
Aretsia; post village in McLennan County.	
Argo; post village in Titus County.	

Atlas sheet.

Argyle; post village in Denton County.

Arion; post village in Liberty County.

Arispe; village on Texas and Pacific Railroad; elevation, 4,371 feet .... Sierra Blanca.

Arleston; post village in Panola County.

Arlie; post village in Childress County.

Arlington; town of Tarrant County; on Texas and Pacific Railway; population, 1,079.

Armour; post village in Limestone County.

Armstrong; creek, a left-hand branch of Leon River, heading in East and West Forks.................................. Stephenville.

Armstrong; village on Armstrong Creek in Erath County..... Stephenville.

Armstrong; a county situated on the eastern edge of the Llano Estacado, in the Panhandle, with an area of 870 square miles. The population was 1,205; the county seat, Claude. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 22 inches, and mean annual temperature 58°. The county is traversed by the Fort Worth and Denver City Railway.

Arneckeville; post village in Dewitt County.

Arnold; village on Texas Pacific Railway in Dallas County.... Dallas.

Arnold; post village in Collin County.

Arp; post village in Smith County.

Arroyo; post village in Cameron County.

Arthur; post village in Lamar County.

Asbury; post village in Upshur County.

Ash; post village in Houston County.

Ash; creek, a left-hand branch of Calamity Creek, tributary to Rio Grande.. Alpine.

Ash; creek, a right-hand branch of West Fork of Trinity River. Weatherford.

Ashby; post village in Matagorda County.

Ashworth; post village in Kaufman County.

Aspermont; post village in Stonewall County; population, 205 (1890).

Asphalt; mountain in Uvalde County .... Brackett.

Atascosa; river, a branch of Frio River in southern Texas.

Atascosa; a southern county, with an area of 1,182 square miles and an altitude of 500 feet. The population was 7,143; the county seat, Pleasanton. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 30 inches, and mean annual temperature 70°. The county is rolling, and not traversed by railroads.

Atascosa; post village in Bexar County.

Ater; post village in Coryell County.

Athens; the county seat of Henderson County; population, 1,035 (1890).

Atherton; post village in Lampasas County.

Atlanta; town in Cass County; population, 1,301.

Atlas; post village in Lamar County.

Atoka; post village in Coleman County .... Abilene.

Attayac; bayou, a left-hand branch of Angelina River.

Attoyac; post village in Nacogdoches County.

Atwell; post village in Callahan County.

	Atlas sheet.
Atwood; post village in Archer County.	
Aubrey; post village in Denton County.	
Auburn; post village in Ellis County	Cleburne.
Audelia; post village in Dallas County.	
Audra; post village in Taylor County.	
Audubon; post village in Wise County.	
Augusta; post village in Houston County.	
Aurora; town in Wise County; population, 372 (1890).	
Austin; a southeastern county, with an area of 712 square miles and an altitude of about 250 feet. The population was 20,676; the county seat, Bellville. The mean magnetic declination in 1900 was 8° 35′. The mean annual rainfall is 45 inches, and mean annual temperature 68°. The county is rolling, and traversed by the Gulf, Colorado and Santa Fe, the Missouri, Kansas and Texas, and the San Antonio and Aransas Pass railroads.	
Austin; county seat of Travis County, and State capital; population, 22,258	Austin.
Authon; village in Parker County	Weatherford.
Avalon; post village in Ellis County.	
Avaton; post-office in Harrison County.	
Avinger; post village in Cass County.	
Avoca; post village in Jones County.	
Avondale; post village in Tarrant County.	
Axtell; post village in McLennan County.	
Azle; village on Ash Creek, in Tarrant County	Weatherford.
Babyhead; post village in Llano County	Llano.
Bachelor; peak in Burnet County	Burnet.
Backbone; creek, a small left-hand branch of Spare Ribs Creek, tributary to Colorado River	Burnet.
Bagby; post village in Fannin County.	
Bagdad; village in Williamson County	Georgetown.
Bagwell; post village in Red River County.	
Bailey; a northwestern county, with an area of 1,000 square miles and an average altitude of 3,800 feet. The population was 4. The mean magnetic declinaton in 1900 was 11° 15′. The mean annual rainfall is 15 inches, and mean annual temperature 57°. This county is located on the Staked Plains and is not traversed by any railroads.	
Bailey ; post village in Fannin County.	
Bailey Branch; small right-hand intermittent branch of Double Mountain Fork of Brazos River	Roby.
Baileyville; post village in Milam County.	
Baird; county seat of Callahan County; population, 1,502.	
Baker; post village in Angelina County.	
Bala; post village in King County.	
Balch; village in Parker County	Weatherford.
Bald; knob, a triangulation station in Travis County	Austin.
Bald; knob, a hill in Williamson County	Georgetown.
Bald; mountain in Burnet County; elevation, 1,239 feet	Burnet.
Bald, mountain in Stephens County	Breckenridge.
Bald Eagle; peak in Taylor County	Abilene.
Bald Prairie; post village in Robertson County.	

	Atlas sheet.
Baldwin; tank, a reservoir in Uvalde County	Uvalde.
Baldy; peak in Davis Range of mountains; elevation, 8,382 feet.	Valentine.
Ballinger; county seat of Runnells County, on the Colorado River; population, 1,128	Ballinger.
Ballowe; post village in Brazoria County.	
Balm; post village in Cooke County.	
Balsora; post village in Wise County.	
Bancroft; post village in Chambers County.	
Bandera; county seat of Bandera County; population, 372 (1890).	
Bandera; a central county, with an area of 1,007 square miles and an altitude of 2,000 feet. The population was 5,332; the county seat, Bandera. The mean magnetic declination in 1900 was 8° 35′. The mean annual rainfall is 28 inches, and the mean annual temperature 65°. The county is not traversed by railroads.	
Bangs; post village in Brown County, on the Gulf, Colorado and Santa Fe Railroad	Coleman.
Banquete; post village in Nueces County.	
Bantam; post village in Fannin County.	
Bar; gap in Mills County	Lampasas.
Barado; post village in Walker County.	
Barber; mountain in Palo Pinto County	Palo Pinto.
Barclay; post village in Falls County.	
Bardwell; post village in Ellis County.	
Barillos; creek, rises in the Puerta Citas Mountains and flows easterly, sinking in the valley below	Albany.
Barker; post village in Harris County.	
Barksdale; post village in Edwards County, on the east bank of Nueces River	Nueces.
Barlow; post village in Cooke County.	
Barnard; knob, a hill in Hood County	Granbury.
Barrilla; mountains in Jeff Davis and Reeves counties; elevation, 5,560 feet	Fort Davis.
Barron; creek, a left-hand branch of Pedernales River	Fredericksburg.
Barry; post village in Navarro County.	
Barstow; post village and county seat of Ward County.	
Bartlett; town of Williamson County; population, 957	Taylor.
Barton; creek, a right-hand branch of Palo Pinto Creek, tributary to Brazos River.	Stephenville. Palo Pinto.
Barton; creek, a right-hand branch of Colorado River	Blanco. Austin.
Bartonville; post village in Denton County.	
Bascom; post village in Smith County.	
Basin Springs; post village in Grayson County.	
Bass; canyon in El Paso County	Chispa.
Bass; post village in Smith County.	
Bassett; post village in Bowie County.	
Bastrop; a central county, with an area of 881 square miles and an average altitude of 500 feet. The population was 26,845; the country seat, Bastrop. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 40 inches, and the mean annual temperature 68°. The county is rolling, and is traversed by the Houston and Texas Central, and the Missouri, Kansas and Texas railroads.	

	Atlas sheet.
Bastrop; the county seat of Bastrop County, on the Colorado River; population, 2,145	Bastrop.
Bateman; post village in Bastrop County.	
Bates; post village in Denton County.	
Batesville; county seat of Zavalla County.	
Batesville; hill in Zavalla County; elevation, 964 feet	Uvalde.
Bath; post village in Walker County.	
Battle; creek, a right-hand tributary of Clear Fork of Brazos River	Albany.
Battle; post village in McLennan County.	
Battleground; creek, a small left-hand branch of Brushy Creek, tributary to San Gabriel River	Taylor.
Baurs; post village in Harris County.	
Bay City; county seat of Matagorda County.	
Baylor; a north central county, with an area of 957 square miles and an average altitude of 1,500 feet. The population is 3,052; the county seat, Seymour. The mean magnetic declination in 1900 was 8° 40′. The mean annual rainfall is 28 inches, and the mean annual temperature 63°. The county is rolling, and is traversed by the Wichita Valley Railway.	
Bazette; post village in Navarro County.	
Bead; mountain in Coleman County	Ballinger.
Bead Mountain; creek, a small right-hand branch of Home Creek, tributary to Colorado River	Ballinger.
Bear; creek, a right-hand branch of North Fork of San Gabriel River	Burnet. Georgetown.
Bear; right-hand tributary of Clear Fork of Brazos River	Albany.
Bear; creek, a right-hand branch of Trinity River	Dallas.
Bear; creek, a left-hand branch of Llano River	Mason.
Bear; creek, a left-hand branch of South Palo Pinto River, and tributary of Brazos River	Eastland. Palo Pinto.
Bear; creek, a left-hand branch of North Fork, tributary to Guadalupe River	Kerrville.
Bear; creek, a left-hand branch of Brazos River	Cleburne. Waco.
Bear; creek, a right-hand branch of Pedernales River	Fredericksburg.
Bear; creek, a right-hand branch of Leon River	Hamilton.
Bear; creek, a left-hand branch of Onion Creek, tributary to Colorado River	Austin.
Bear; small left-hand branch of Brazos River	Waco. Cleburne.
Bear; right-hand branch of Clear Fork of Trinity River	Weatherford.
Bear Creek; post village on Clear Fork of Trinity River, in Tarrant County	Weatherford.
Bears Foot; creek, a small left-hand branch of Colorado River	Ballinger.
Beasley; post village in Fort Bend County.	
Beatrice; post village in Frio County.	
Beaukiss; post village in Williamson County	Bastrop.
Beaumont; county seat of Jefferson County; population, 9,427.	
Beautiful View; small right-hand branch of Canadian River.	
Beaver; post village in Wichita County.	
Beaver; creek, a small left-hand branch of Colorado River	Burnet.
Beaver; creek, a right-hand branch of Llano River	Mason.

Atlas sheet

Beaver; creek, a right-hand tributary of Red River in northern Texas.

Bebe; post village in Gonzales County.

Beck; branch, a small left-hand intermittent branch of Leon River, tributary to Little River .... Meridian.

Beckham; post village in Hopkins County.

Beckville; post village in Panola County.

Bedford; post village in Tarrant County .... Fort Worth.

Bedias; post village in Grimes County.

Bedias; creek, a right-hand branch of Trinity River.

Bee; a southern county, with an area of 875 square miles and an average altitude of 250 feet. The population is 7,720; the county seat, Beeville. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 35 inches, and the mean annual temperature 70°. The county is level, and is traversed by the Gulf, Western Texas and Pacific, and the San Antonio and Aransas Pass railways.

Bee; mountain in Bosque County .... Granbury.

Bee; branch, a small right-hand intermittent branch of Blanket Creek, tributary to Pecan Bayou .... Brownwood.

Bee; creek, a small left-hand intermittent branch of Meridian Creek, tributary to Bosque River .... Meridian.

Bee; creek, a small right-hand intermittent branch of Colorado River .... Austin.

Bee; creek, a small left-hand branch of Brazos River .... Weatherford. Granbury.

Bee Caves; post village in Travis County.

Bee Caves; creek, a right-hand branch of North Fork, tributary to Guadalupe River .... Kerrville.

Beech Grove; post village in Jasper County.

Bee Cove; creek, a small right-hand branch of Simms Creek, tributary to Little River .... Lampasas.

Bee Creek; post village in Ellis County.

Beehouse; post village in Coryell County.

Beehouse; creek, a right-hand branch of Cowhouse Creek, tributary to Little River .... Lampasas.

Beene; post village in Freestone County.

Beeville; county seat of Bee County; population, 1,311 (1890).

Belcherville; town of Montague County; population, 305.

Belfalls; post village in Bell County.

Belgrade; post village in Newton County.

Belk; post village in Lamar County.

Belknap; post village in Young County.

Bell; a central county, with an area of 1,091 square miles and an average altitude of 500 feet. Population, 45,535; the county seat, Belton. The mean magnetic declination in 1900 was 8° 45′. The mean annual rainfall is 40 inches, the mean annual temperature 67°. The county is rolling, and is traversed by the Missouri, Kansas and Texas, and the Gulf, Colorado and Sante Fe railroads.

Bell; branch, a small right-hand branch of Great Creek, tributary to Bosque River .... Stephenville.

Bell; branch, a right-hand branch of Cottonwood Creek, tributary to the West Fork of Trinity River .... Fort Worth.

Atlas sheet.

Bell; mountain in Gillespie County .... Fredericksburg

Bellevue; post village in Clay County.

Bells; town in Grayson County; population, 474.

Bellville; town in Austin County; population, 807 (1890).

Belmena; post village in Milam.

Belmont; post village in Gonzales County.

Belott; post village in Houston County.

Belton; county seat of Bell County, on the Missouri Pacific, and the Texas Pacific railroads; population, 3,700 .... Temple

Benarnold; post village in Milam County.

Benavides; town in Duval County; population, 1,424 (1890).

Benbrook; village on Wood Branch in Tarrant County......... Fort Worth.

Benchley; post village in Robertson County.

Bend; village on Colorado River, in San Saba County........... San Saba.

Ben Franklin; post village in Delta County.

Benhur; post village in Limestone County.

Benina; post village in San Augustine County.

Benjamin; county seat of Knox County.

Bennett; creek, a right-hand branch of Lampasas River, tributary to Little River. San Saba. Lampasas.

Benton; town of Atascosa County; population, 502 (1890).

Benvanue; post village in Clay County.

Ben Wheeler; post village in Van Zandt County.

Berclair; post village in Goliad County.

Berea; post village in Bell County.

Berkeley; creek, a left-hand branch of the Red River in the Panhandle.

Berlin; post village in Erath County.

Bernardo; post village in Colorado County.

Berry; creek, a left-hand branch of San Gabriel River.......... Georgetown.

Berry; creek, a left-hand branch of Paluxy Creek, tributary to Brazos River.. Stephenville.

Berry; knob, a hill in Johnson County......................... Granbury.

Berryville; post village in Henderson County.

Bertram; village on Austin and Northwestern Railroad, in Burnet County.. Burnet.

Best; post village in Hays County.

Bethel; post village in Anderson County.

Bettie; town in Upshur County; population, 284 (1890).

Beverly; post village in Briscoe County.

Bexar; a central county, with an area of 1,268 square miles and an average altitude of 500 feet. The population is 69,422; the county seat, San Antonio. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 30 inches, and the mean annual temperature 68°. The county is rolling, and is traversed by the San Antonio and Gulf, the International and Great Northern, Southern Pacific, and the San Antonio and Aransas Pass railroads.

Bexar; post village in Bexar County.

Beyersville; post village in Williamson County.

Biardstown; post village in Lamar County.

Bibb; post village in Comanche County.

Bidais; creek, a small right-hand branch of Trinity River in east Texas.

	Atlas sheet.
Biegel; post village in Fayette County.	
Big; a canyon in Kinney County	Nueces.
Big; branch, a left-hand branch of Gonzales Creek, tributary to Clear Fork of Brazos River	Breckenridge.
Big; branch, a small right-hand branch of Gonzales Creek, tributary to Clear Fork of Brazos River	Breckenridge.
Big; mountain, in Uvalde County	Uvalde.
Big; valley, on Colorado River, Mills County	San Saba.
Big Aguja; canyon in Jeff Davis County	Fort Davis.
Big Aguja; mountain in Jeff Davis County	Fort Davis.
Big Bear; creek, a right-hand branch of West Fork of Trinity River.	
Big Cedar; creek, a right-hand branch of Brazos River	Breckenridge.
Big Cedar; creek, a right-hand branch of Navasota River.	
Big Cow; creek, a small right-hand branch of Sabine River in east Texas.	
Big Cypress; right-hand branch of Red River in northeast Texas.	
Big Cypress; creek, a right-hand tributary to Red River in northeast Texas.	
Bigfoot; post village in Frio County.	
Big Fossil; creek, a left-hand branch of West Fork of Trinity River	Fort Worth.
Biggers; post village in Collin County.	
Bighill; post village in Limestone County	
Big Lucy; creek, a right-hand branch of Lampasas River, tributary to Little River	Lampasas.
Big Mountain; creek, a right-hand branch of Southern Leon Creek, tributary to Little River.	Brownwood. Hamilton.
Big Pine; creek, a small right-hand branch of Neches River in east Texas.	
Big Sandy; creek, a right-hand tributary to Neches River.	
Big Sandy; town in Upshur County; population, 323 (1890).	
Big Spring; county seat of Howard County; population, 1,158 (1890).	
Big Sunday; creek, a right-hand branch of Palo Pinto Creek, tributary to Brazos River.	Stephenville. Palo Pinto.
Big Trestle; draw, a shallow valley in Presidio County	Marfa.
Big Valley; village in Mills County	San Saba.
Bill Black; peak in San Saba County	Mason.
Billington; post village in Limestone County.	
Bills; creek, a tributary to Palo Pinto Creek	Breckenridge.
Birch; post village in Burleson County.	
Birch Hollow; a hill in Sutton County	Fort McKavett.
Bird; creek, a small left-hand branch of Leon River, tributary to Little River	Temple.
Birdston; post village in Navarro County.	
Birdville; post village in Tarrant County	Fort Worth.
Birthright; post village in Hopkins County.	
Bishop; post village in McLennan County.	
Bitter; creek, a right-hand tributary to Brazos River	Sweetwater. Roby.

	Atlas sheet.
Bitter; creek, a right-hand branch of Clear Fork of Brazos River.	Sweetwater. Roby. Anson.
Bivens; town in Cass County; population 302 (1890).	
Black; bayou, a right-hand branch of Red River in northeast Texas.	
Black; creek, a small right-hand branch of Little Llano Creek, tributary to Llano River	Llano.
Black; cypress, a right-hand branch of Red River in northeast Texas.	
Black; hills in Presidio County	Shafter.
Black; mountain in Jeff Davis County; elevation, 7,550 feet	Fort Davis.
Black; mountain in Uvalde County; elevation, 1,277 feet	Uvalde.
Black; mountain in Kinney and Edwards counties	Nueces.
Blackfoot; post village in Anderson County.	
Black Hills; creek, a left-hand branch of Rio Grande	Shafter.
Black Jack Grove; village of Hopkins County; population, 676 (1890).	
Black Jack Springs; post village in Fayette County.	
Blackland; post village in Rockwall County.	
Blackoak; post village in Hopkins County.	
Black Spring; village in Palo Pinto County	Palo Pinto.
Black Spring; branch, a small right-hand branch of Little Green Creek, tributary to Bosque River	Stephenville.
Blake; post village in Brown County.	
Blanche; post village in Cottle County.	
Blanco; a central county, with an area of 762 square miles and an average altitude of 1,250 feet. The population was 4,703; the county seat, Johnson City. The mean magnetic declination in 1900 was 9°. The mean annual rainfall is 30 inches, and the mean annual temperature, 66°. The county has no railroads.	
Blanco; creek, a small stream in southern Texas flowing into Copano Bay.	
Blanco; river, a left-hand tributary to Nueces River.	
Blanco; town of Blanco County; population, 269 (1890).	
Blanconia; post village in Bee County.	
Bland; post village in Bell County.	
Blanket; creek, a left-hand branch of Pecan Bayou, tributary to Clear River	Brownwood.
Blanket; post village in Brown County	Brownwood.
Blanton; post village in Hill County	Cleburne.
Bleiblerville; post village in Austin County.	
Blevins; post village in Falls County.	
Bliss; post village in Grayson County.	
Block; creek, a left-hand branch of Guadalupe River	Fredericksburg.
Blocker; post village in Harrison County.	
Bloomburg; post village in Cass County.	
Bloomfield; branch, a small right-hand intermittent branch of Clear Fork of Brazos River	Breckenridge.
Bloomfield; post village in Cooke County.	
Blooming Grove; post village of Navarro County; population, 585.	

	Atlas sheet,
Blossom; town of Lamar County; population, 874.	
Blowout; post village in Blanco County.	
Blue; group of hills in Mason County; elevation, 2,217 feet	Mason.
Blue; mound, a hill in Tarrant County	Fort Worth.
Blue; mountain in Jeff Davis County; elevation, 7,330 feet	Valentine.
Blue; mountain in Uvalde County; elevation, 1,277 feet	Uvalde.
Blue; post village in Lee County.	
Bluegrove; post village in Clay County.	
Blueridge; post village in Collin County.	
Blue Spring; village in Parker County	Palo Pinto.
Bluff; post village in Fayette County.	
Bluff; creek, a right-hand branch of Clear Fork of Bazos River	Anson. Albany.
Bluff; creek, a right-hand branch of Colorado River	Brady.
Bluff; creek, a left-hand branch of Elm Creek, tributary to Colorado River.	Sweetwater. Abilene. Ballinger.
Bluff; creek, a small left-hand branch of West Nueces River	Nueces.
Bluff; creek, a small right-hand branch of Canadian River.	
Bluff Dale; village on Paluxy Creek in Erath County	Stephenville.
Bluff Springs; village on Onion Creek, tributary to Colorado River	Austin.
Bluffton; post village in Llano County	Burnet.
Blum; post village in Hill County	Cleburne.
Blunt; post village in Freestone County.	
Bluntzer; post village in Nueces County.	
Bly; post village in Titus County.	
Board; branch, a small right-hand tributary to Clear Fork of Brazos River	Albany.
Board; post village in Coryell County.	
Boaz; post village in Coryell County.	
Bobbin; post village in Montgomery County.	
Bodeville; village in Mason County	Mason.
Boerne; county seat of Kendall County; population, 433 (1890).	
Bofecillos; short mountain range in western Texas, bordering the Rio Grande.	
Bofecillos; canyon in Presidio County	Polvo.
Bofecillos; creek, a small left-hand branch of Rio Grande in Presidio County.	
Bogata; post village in Red River County.	
Bogel; village on Alamita Creek in Presidio County	Marfa.
Boggy; branch, a right-hand tributary of Trinity River	Cleburne.
Boggy; creek, a small left-hand intermittent branch of Colorado River	Austin.
Boggy; post village in Leon County.	
Boiling; mountain in Kinney County	Nueces.
Bois D'Arc; creek, a small right-hand branch of Red River in northeast Texas.	
Bolf; post village in Runnels County.	
Bolivar; point on the north of the entrance to Galveston Bay.	
Bolivar; post village in Denton County.	
Bonanza; post village in Hopkins County	

Atlas sheet.

Bonham; county seat of Fannin County; population, 5,042.

Bonita; post village in Montague County.

Bonner; post village in Freestone County.

Bonney; post village in Brazoria County.

Bono; post village in Johnson County........................ Granbury.

Bonus; post village in Wharton County.

Boon Slough; small left-hand intermittent tributary to Clear Fork of Brazos River.................................. Albany.

Boonsville; post village in Wise County.

Booth; post village in Fort Bend County.

Boquillas; post village in Brewster County.

Boracho; peak in Jeff Davis County; elevation, 5,661 feet...... Valentine.

Borden; a northwestern county, with an area of 892 square miles and an average elevation of 3,500 feet. The population was 776; the county seat, Gail. The mean magnetic declination in 1900 was 8° 40′. The mean annual rainfall is 19 inches, and the mean annual temperature 60°. The county has no railroads.

Borden; post village in Colorado County.

Borega; creek, a small tributary to Frio River in southern Texas.

Boren: post village in Panola County.

Borracho; village on Rio Grande in Presidio County........... Ruidosa.

Bosque; a north central county with an area of 972 square miles. The population was 17,390; the county seat, Meridian. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 40 inches, and the mean annual temperature 66°. The county is traversed by the Texas Central, and the Gulf, Colorado and Santa Fe railroads.

Bosque; river, a right-hand branch of Brazos River............ Stephenville. Meridian. Hamilton. Waco.

Bosqueville; post village in McLennan County.

Boston; the county seat of Bowie County.

Boswell; post village in Walker County.

Bottom; post village in Bell County.

Bovina; post village in Parmer County.

Bowie; a northeastern county with an area of 907 square miles. The population was 26,676; the county seat, Boston. The mean magnetic declination in 1900 was 7°. The mean annual rainfall is 50 inches, and the mean annual temperature 64°. The county is traversed by the Texas and Pacific, and the St. Louis and Southwestern railroads.

Bowie; town in Montague County; population, 2,600.

Bowles; post village in Uvalde County.

Bowling; post village in Freestone County.

Bowser; post village in San Saba County.

Boxelder; post village in Red River County.

Boxwood; post village in Upshur County.

Boyce; post village in Ellis County.

Boyd; post village in Wise County.

Boyds; cove in Coryell County............................... Lampasas.

	Atlas sheet.
Boydston; post village in Donley County.	
Boz; post village in Ellis County.	
Bracken; post village in Comal County.	
Brackett; town in Kinney County; population, 1,649 (1890)	Brackett.
Bracks, canyon in Presidio County	San Carlos.
Bradford; post village in Anderson County.	
Bradshaw; branch, a right-hand branch of Hog Creek, tributary to Pecan Bayou.	Eastland. Brownwood. Coleman.
Brady; creek, a large left-hand branch of San Saba River, tributary to the Colorado.	San Angelo. Eden. Brady. San Saba.
Brady; mountains in Concho and McCulloch counties; elevation, 2,000 feet.	Eden. Brady.
Brady; county seat of McCulloch County, situated on Brady Creek; population, 560 (1890)	Brady.
Brambleton; post village in Tarrant County.	
Branchville; post village in Milan County.	
Brandon; post village in Hill County; population, 457.	
Bransford; post village in Tarrant County.	
Brashear; post village in Hopkins County.	
Brazoria; town in Brazoria County; population, 432 (1890).	
Brazoria; a southeastern county, with an area of 1,438 square miles. The population was 14,861; the county seat, Angleton. The mean magnetic declination in 1900 was 7° 50′. The mean annual rainfall is 50 inches, and the mean annual temperature 70°. The county is traversed by the Houston, East and West Texas, and the International and Great Northern railroads.	
Brazos; post village in Palo Pinto County.	
Brazos; a southeastern county, with an area of 510 square miles. The population was 18,859; the county seat, Bryan. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 45 inches, and the mean annual temperature 68°. The county is traversed by the Gulf, Colorado and Sante Fe, and Houston and the Texas Central railroads.	
Brazos; one of the largest rivers of Texas. It has its source in the Llano Estacado by several branches—Salt, Double Mountain, and Clear forks. It flows in a generally southeasterly course to the Gulf of Mexico, which it enters at Quintana. The drainage area is 69,646 square miles; the length, 912 miles.	Breckenridge. Palo Pinto. Weatherford. Granbury. Cleburne. Waco. Temple.
Brazos Point; village in Bosque County	Granbury.
Breckenridge; county seat of Stephens County, on Gonzales Creek; population, 462 (1890)	Breckenridge.
Bremond; town in Robertson County; population, 387 (1890).	
Brenham; city in Washington County and county seat; population, 5,968.	
Breslau; post village in Lavaca County.	
Brewer; post village in Freestone County.	

Atlas sheet.

Brewster; a western county, with an area of 5,006 square miles. The population was 2,356; the county seat, Alpine. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 15 inches, and the mean annual temperature 65°. The county is traversed by the Southern Pacific Railroad.

Brewster; creek, a small right-hand branch of Stampede Creek, tributary to Leon River .... Temple.

Briar; town in Wise County; population, 303 (1890).

Briar; village in Tarrant County .... Weatherford.

Briar; branch, a right-hand branch of West Fork of Trinity River .... Weatherford.

Brice; post village in Briscoe County.

Bridgeport; town in Wise County; population, 900.

Bridgevalley; post village in Fayette County.

Briggs; post village in Burnet County.

Bright; post village in Navarro County.

Brighton; post village in Nueces County.

Brigman; post village in Hill County.

Briscoe; a county situated in the Panhandle, with an area of 850 square miles. The population was 1,253; the county seat, Silverton. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 20 inches, and the mean annual temperature 58°. The county has no railroads.

Bristol; town in Ellis County; population, 303 (1890).

Britt; post village in Leon County.

Britton; post village in Ellis County.

Broadway; post village in Lamar County.

Brock; village in Parker County .... Weatherford.

Brockman; branch, a small left-hand branch of Elm Fork of Trinity River, in Dallas County .... Dallas.

Brogada; village in Reeves County .... Fort Davis.

Bronte; post village in Coke County.

Brookeland; post village in Sabine County.

Brookhaven; post village in Bell County.

Brookshire; post village in Waller County.

Brookston; town in Lamar County; population, 237 (1890).

Brown; a central county, with an area of 911 square miles. The population was 16,019; the county seat, Brownwood. The mean magnetic declination in 1900 was 9° 15′. The mean annual rainfall is 30 inches, and the mean annual temperature 65°. The county is traversed by the Fort Worth and Rio Grande and the Gulf, Colorado and Santa Fe railroads.

Brown; creek, a left-hand branch of Pecan Bayou, tributary to Colorado River. {San Saba. Brownwood.

Brownings; post village in Smith County.

Brownsboro; post village in Henderson County.

Brownsville; county seat of Cameron County; population, 6,305.

Brownwood; county seat of Brown County, on the Gulf, Colorado and Santa Fe Railway; population, 3,965 .... Brownwood.

Broxon; post village in Houston County.

	Atlas sheet.
Bruce; village on the Missouri, Kansas and Texas Railroad in McLennan County	Temple.
Bruce; village in Johnson County	Weatherford.
Bruceville; post village in McLennan County.	
Brugerhoff; village on the Austin and Northwestern Railroad and on Running Brushy Creek, in Williamson County	Georgetown.
Brumlow; post village in Wise County.	
Bruni; post village in Webb County.	
Brunner; post village in Harris County.	
Brushy; creek, a large right-hand branch of San Gabriel River	Georgetown. Austin. Bastrop. Taylor.
Brushy; creek, a left-hand intermittent branch of Frio River, tributary to the Nueces River	Uvalde.
Brushy; creek, a left-hand tributary to Colorado River	Sweetwater.
Brushy; creek, a right-hand tributary ot Clear Fork of Brazos River	Albany.
Brushy; gap in Comanche County	Brownwood.
Brushy; knob, a hill in Tom Green County	San Angelo.
Brushy; knob, a hill in Johnson County	Fort Worth. Cleburne.
Brushy; knob, a hill in Hill County	Cleburne.
Brushy; a mountain in Erath County	Stephenville.
Brushy Creek; post village in Anderson County.	
Bryan; county seat of Brazos County; population, 3,589.	
Bryan Mill; post village in Cass County.	
Bryarly; post village in Red River County.	
Brymer; post village in Burleson County.	
Bryson; post village in Jack County.	
Buchanan; town in Bowie County; population, 274 (1890).	
Buck; branch, a small right-hand branch of Great Creek, tributary to Bosque River	Stephenville.
Buck; creek, a right-hand tributary to Clear Fork of Brazos River	Abilene.
Buck; creek, a right-hand branch of Palo Pinto Creek, tributary to Brazos River.	Stephenville. Palo Pinto.
Buck; creek, a small left-hand intermittent branch of Brazos River	Granbury.
Buck; mountain in Stephens County	Breckenridge.
Buckholts; post village in Milam County, on the Gulf, Colorado and Santa Fe Railway	Taylor.
Buckhorn; post village in Austin County.	
Buckner; post village in Parker County	Weatherford.
Buda; post village in Hays County, on International and Great Northern Railroad	Austin.
Buel; post village in Johnson County, on Gulf, Colorado, and Santa Fe Railroad	Cleburne.
Buffalo; post village in Leon County.	
Buffalo; creek, a left-hand branch of Colorado River	San Saba. Brownwood.
Buffalo; creek, a small left-hand branch of Cherokee Creek, tributary to Colorado River.	San Saba. Lampasas.

	Atlas sheet.
Buffalo; a right-hand branch of Denton Fork tributary to Trinity River	Fort Worth.
Buffalo; creek, a left-hand branch of Nolands River, tributary to Brazos River	Cleburne.
Buffalo; creek, a small left-hand intermittent branch of Pedernales River, tributary to the Colorado River	Blanco.
Buffalo; creek, a right-hand tributary to Trinity River.	
Buffalo; peak in Blanco County	Blanco.
Buffalo Gap; village in Taylor County	Abilene.
Buffalo Springs; post village in Clay County.	
Bufford; creek, a right-hand branch of Clear Fork of Brazos River	Breckenridge.
Bugbee; post village in Hutchinson County.	
Buhler; post village in Jackson County.	
Bulcher; post village in Cooke County.	
Bull; creek, a small left-hand branch of Colorado River	San Saba.
Bullard; post village in Smith County.	
Bull Head; creek, a small right-hand branch of Hickory Creek, tributary to Llano River	Llano.
Bull Head; mountain in Llano County; elevation, 1,707 feet	Llano.
Bullhead; creek, a left-hand branch of East Nueces River	Nueces.
Bullhead; mountain in Edwards County; elevation, 2,050 feet.	Nueces.
Bull Hide; creek, a right-hand branch of Brazos River	Temple.
Bull Hollow; hill in Schleicher County	Fort McKavett.
Bull Hollow; valley in Sutton County	Rock Springs.
Bulverde; post village in Bexar County.	
Buna; post village in Jasper County.	
Bunker; hill in Erath County	Stephenville.
Bunns Bluff; post village in Orange County.	
Bunyan; post village in Erath County.	
Burgess; post village in Bell County.	
Burgess; creek, a small right-hand branch of South Fork of Trinity River	Weatherford.
Burke; post village in Angelina County.	
Burkett; post village in Coleman County.	
Burkeville; post village in Newton County.	
Burleigh; post village in Austin County.	
Burleson; village on the Missouri, Kansas and Texas Railway, in Johnson County	Fort Worth.
Burleson; a southeastern county, with an area of 677 square miles. The population was 18,367; the county seat, Caldwell. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 45 inches, and the mean annual temperature 68°. The county is traversed by the Gulf, Colorado and Santa Fe Railroad.	
Burleson; creek, a small left-hand branch of Sulphur Creek, tributary to Little River	Lampasas.
Burlington; post village in Milam County.	
Burnet; a central county, with an area of 1,010 square miles. The population was 10,528; the county seat, Burnet. The mean magnetic declination in 1900 was 8° 35′. The mean annual rainfall is 35 inches, the mean annual temperature 67°. The county is traversed by the Austin and Northwestern Railroad.	Burnet. Lampasas. Georgetown. Blanco.

	Atlas sheet.
Burnet; the county seat of Burnet County, situated on the Austin and Northwestern Railroad; population, 1,003.	
Burns; village in Cooke County; population, 65 (1890).	
Burnt Oak; creek, a small right-hand branch of Kickapoo Creek, tributary to Concho River	San Angelo.
Burros; canyon in Presidio County	Polvo.
Burrow; post village in Hunt County.	
Burton; town in Washington County; population, 384 (1890).	
Burton; knob, a hill in Parker County	Weatherford.
Bush; post village in Coryell County.	
Bushy; creek, a right-hand tributary to Trinity River	Dallas.
Busyton; village in Hamilton County	Meridian.
Bute; post village in Henderson County.	
Butler; post village in Freestone County.	
Buttercup; village in Williamson County	Austin.
Buttfield; post village in Jefferson County.	
Buttermilk; creek, a small right-hand intermittent branch of Mustang Creek, tributary to Colorado River	Ballinger.
Bynum; post village in Hill County.	
Byrds; post village in Brown County.	
Byrds Store; village in Pecan Bayou	Coleman.
Byrne; creek, a left-hand branch of the Red River, in the Panhandle.	
Byrne; creek, a small right-hand branch of Llano River, tributary to the Colorado	Llano.
Byron; post village in Ellis County.	
Cabaza; post village in Dewitt County.	
Cactus; post village in Webb County.	
Caddell; post village in San Augustine County.	
Caddo; post village in Stephens County.	
Caddo; peak in Johnson County	Cleburne.
Caddo; village on Big Caddo Creek, tributary to Brazos River	Breckenridge.
Caddo Mills; town of Hunt County; population, 234 (1890).	
Caddo Peak; post village in Callahan County.	
Cade; post village in Navarro County.	
Cadiz; post village in Bee County.	
Cain; post village in Dallas County.	
Calamity; creek, a left-hand branch of Rio Grande	Alpine.
Calaveras; village of Wilson County; population, 369 (1890).	
Caldwell; a central county, with an area of 530 square miles. The population was 21,765; the county seat, Lockhart. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 40 inches, and the mean annual temperature 68°. The county is traversed by the Southern Pacific, Missouri, Kansas and Texas, and the San Antonio and Aransas Pass railroads.	
Caldwell; the county seat of Burleson County; population, 1,535.	
Caledonia; post village in Rusk County.	
Calef; village on Fort Worth and Denver Railway, in Tarrant County	Fort Worth

	Atlas sheet.
Calhoun; a southern county, with an area of 592 square miles. The population was 2,395; the county seat, Port Lavaca. The mean magnetic declination in 1900 was 7° 15′. The mean annual rainfall is 42 inches, and the mean annual temperature 70°. The county is traversed by the Southern Pacific, and the Gulf, Western Texas and Pacific railroads.	
Calhoun; post village in Dallas County.	
California; creek, a left-hand branch of Clear Fork of Brazos River.	Roby. Anson.
Call; post village in Newton County.	
Callahan; a north central county, with an area of 882 square miles. The population was 8,768; the county seat, Baird. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 28 inches, and the mean annual temperature 65°. The county is traversed by the Texas and Pacific Railway.	Albany. Anson. Abilene.
Callina; post village in Limestone County.	
Callis; post village in Collin County.	
Callisburg; post village in Cooke County.	
Calloway; post village in Upshur County.	
Calvert; city in Robertson County; population, 3,322.	
Camden; village in Comanche County	Hamilton.
Cameron; a southern county, with an area of 2,203 square miles. The population was 16,095; the county seat, Brownsville. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 30 inches, and the mean annual temperature 75°. The county is traversed by the Rio Grande Railroad.	
Cameron; the county seat of Milam County; population, 3,341.	
Camilla; post village in San Jacinto County.	
Camp; a northeastern county, with an area of 217 square miles. The population was 9,146; the county seat, Pittsburg. The mean magnetic declination in 1900 was 7° 15′. The mean annual rainfall is 48 inches, and the mean annual temperature 65°. The county is traversed by the Missouri, Kansas and Texas, and the St. Louis and Southwestern railroads.	
Camp; creek, a small left-hand branch of San Saba River, tributary to the Colorado.	San Saba. Mason.
Camp; creek, a small left-hand branch of Brazos River	Granbury.
Camp; creek, a right-hand branch of Home Creek, tributary to Colorado River.	Coleman. Brady.
Campbell; post village in Hunt County.	
Campbell; valley in Menard County	Fort McKavett.
Campbell; post village in Hunt County.	
Campbellton; post village in Atascosa County.	
Camp Colorado; post village in Coleman County	Coleman.
Camp Lake; slough, a left-hand intermittent tributary of Nueces River	Uvalde.
Camp Rice; army post, in El Paso County	Fort Hancock.
Camp San Saba; post village in McCulloch County; elevation, 1,687 feet	Mason.
Camp Verde; post village in Kerr County.	
Camp Wood; village in Edwards County	Nueces.

	Atlas sheet.
Camp Wood; creek, a left-hand branch of east Nueces River, tributary to the Nueces	Nueces.
Canadian; county seat of Hemphill County.	
Canadian; river, a large branch of the Arkansas, rising in Raton Pass in northeastern Mexico, and flowing thence south and east, crossing the Panhandle of Texas and entering the Arkansas in eastern Indian Territory. The drainage basin is 42,710 square miles; the length, 758 miles.	
Canary; post village in Polk County.	
Candler; branch, a small left-hand intermittent branch of Steppe Creek, tributary to Pecan Bayou	Brownwood.
Caney; post village in Matagorda County.	
Caney; bayou, a small stream flowing into the Gulf near Matagorda Bay.	
Caney; creek, a tributary of San Jacinto River.	
Cannon; post village in Grayson County.	
Cañoncito Blanco; a head branch of Red River in the Staked Plains.	
Canton; county seat of Van Zandt County; population, 421 (1890).	
Cany; creek, a right-hand tributary of Trinity River.	
Canyon; county seat of Randall County.	
Cap; a mountain in Llano County; elevation, 1,376 feet	Llano.
Capitola; post village in Mason County.	
Capote; creek, a small left-hand branch of the Rio Grande, in Presidio County.	
Capote; creek, a left-hand intermittent branch of the Rio Grande River	San Carlos.
Capote; draw, a shallow valley in Presidio County	Marfa.
Capote; peak in Presidio County; elevation, 6,185 feet	San Carlos.
Capote; pass in Capote Mountains, Presidio County.	
Caps; post village in Taylor County.	
Caradan; post village in Mills County.	
Carancahua; post village in Jackson County.	
Carancahua; a small stream flowing into Matagorda Bay.	
Carbon; post village in Eastland County.	
Carbondale; village on Wagon Timber Creek, tributary to Brazos River	Breckenridge.
Carbonville; village in Uvalde County	Brackett.
Carey; post village in Childress County.	
Carl; post village in Travis County	Rinard.
Carleton; village in Hamilton County	Hamilton.
Carlisle; post village in Rusk County.	
Carmine; post village in Fayette County.	
Carmona; post village in Polk County.	
Carpenter; post village in Bexar County.	
Carpenter; hills in Hays County	Austin.
Carrizo; county seat of Zapata County; population, 243 (1890).	
Carrizo Springs; county seat of Dimmit County; population, 289 (1890).	
Carrol; post village in Smith County.	
Carroll Prairie; village of Hopkins County; population, 231 (1890).	

	Atlas sheet.
Carrollton; post village on the St Louis Southwestern, and the Missouri, Kansas and Texas railroads, in Dallas County	Dallas.
Carson; a county situated in the Panhandle, with an area of 860 square miles. The population was 469; the county seat, Panhandle. The mean magnetic declination in 1900 was 10° 35′. The mean annual rainfall is 22 inches, and the mean annual temperature 57°. The county is traversed by the Southern Kansas Railway of Texas, and the Fort Worth and Denver City Railway.	
Carson; post village in Fannin County.	
Carter; post village in Parker County	Weatherford.
Carthage; county seat of Panola County; population, 554 (1889).	
Cartwright; post village in Wood County.	
Casablanca; post village in Nueces County.	
Cash; post village in Hunt County.	
Casket; a mountain in Jeff Davis County; elevation, 6,180 feet	Fort Davis.
Cason; post village in Morris County.	
Cass; a northeastern county, with an area of 945 square miles. The population was 22,841; the county seat, Linden. The mean magnetic declination in 1900 was 6° 50′. The mean annual rainfall is 50 inches, and the mean annual temperature 65°. The county is traversed by the Missouri, Kansas and Texas, and the Texas and Pacific railroads.	
Cass; post village in Cass County.	
Castell, post village in Llano County.	
Castle; gap in Lampasas County	Lampasas.
Castle; peak in Lampasas County; elevation, 1,552 feet	Lampasas.
Castle; peak in Taylor County; elevation 2,400 feet	Sweetwater.
Castleman; creek, a right-hand branch of Brazos River	Temple.
Castro; a county, situated in the Panhandle, with an area of 870 square miles. The population was 400; the county seat, Dimmitt. The mean magnetic declination in 1900 was 11° 15′. The mean annual rainfall is 18 inches, and the mean annual temperature 55°. The county is traversed by the Pecos and Northern Texas Railway.	
Castroville; town of Medina County; population, 1,522 (1890).	
Cataline; post village in Hemphill County.	
Cates; post village in Red River County.	
Catfish; post village in Henderson County.	
Cathedral; a mountain in Brewster County; elevation, 6,860 feet	Alpine.
Cathron Store; post village in Lamar County.	
Cat Spring; post village in Austin County.	
Cave; creek, a left-hand intermittent branch of West Nueces River	Nueces.
Cave; creek, a small right-hand intermittent branch of Middle Bosque Creek	Meridian.
Cave; creek, a small left-hand branch of Pedernales River	Fredericksburg.
Caviness; post village in Lamar County.	
Cayote; post village in Bosque County	Waco.
Cayuga; post village in Anderson County.	
Cecil; post village in Walker County.	
Cedar; post village in Fayette County.	

	Atlas sheet.
Cedar; branch, a small left-hand branch of Trinity River	Dallas.
Cedar; creek, a small right-hand intermittent branch of West Nueces River	Nueces.
Cedar; creek, a small left-hand branch of Brazos River	Waco. Cleburne. Granbury.
Cedar; creek, a right-hand branch of Brazos River	Breckenridge.
Cedar; creek, a small right-hand intermittent branch of Mile Creek, tributary to Colorado River	Hayrick.
Cedar; creek, a small left-hand branch of Elm Creek, tributary to Clear Fork of Brazos River	Abilene.
Cedar; creek, a left-hand intermittent branch of Walnut Creek, tributary to Colorado River.	Austin. Bastrop.
Cedar; creek, a left-hand branch of Lytle Creek, tributary to Clear Fork of Brazos River	Abilene.
Cedar; creek, a small left-hand branch of Leon River, tributary to Little River	Temple.
Cedar; creek, a right-hand branch of Colorado River	Brady.
Cedar; creek, a small left-hand branch of Little Llano Creek, tributary to Llano River	Llano.
Cedar; creek, a right-hand branch of Fernando Creek, tributary to Llano River.	Brady. Mason. Llano.
Cedar; creek, a right-hand tributary of San Saba River	Mason.
Cedar; gap in Comanche County	Brownwood.
Cedar; gap in Taylor County	Abilene.
Cedar; knob, a hill in Kimble County	Rock Springs.
Cedar; knob, a hill in Edwards County; elevation, 2,360 feet	Rock Springs.
Cedar; knob, a hill in Somervell County	Granbury.
Cedar; a mountain in Llano County	Llano.
Cedar; a mountain in Eastland County	Eastland.
Cedar; mountain, a hill on left bank of Colorado River in Coke County	Hayrick.
Cedar; spring in Edwards County	Nueces.
Cedar Bayou; post village in Harris County.	
Cedar Creek; post village in Bastrop County.	
Cedar Hill; city on the Gulf, Colorado and Santa Fe Railway, in Dallas County; population, 242 (1890)	Dallas.
Cedar Hill; triangulation station in Hays County	Austin.
Cedarlake ; post village in Matagorda County.	
Cedar Mills; post village in Grayson County.	
Cedarpark; post village in Williamson County.	
Cedarton; village in Brown County	Coleman.
Cedar Top; peak in Lampasas County	Lampasas.
Cedar Valley; post village in Travis County.	
Cedron; creek, a right-hand branch of Brazos River	Meridian. Waco.
Cego; post village in Falls County.	
Cele; post village in Travis County.	
Celery; creek, a small left-hand branch of San Saba River	Eden.
Celeste; town in Hunt County; population, 671.	
Celina; post village in Collin County.	
Centennial; post village in Panola County.	

	Atlas sheet.
Center; county seal of Shelby County.	
Center City; post village in Mills County	Lampasas.
Center Hill; post village in Hood County	Weatherford.
Center Point; town in Kerr County; population, 543 (1890).	
Centerville; county seat of Leon County; population, 288 (1890).	
Centralia; post village in Trinity County.	
Cerro Diablo; mountain in El Paso County	Salt Basin.
Cestohowa; post village in Karnes County.	
Ceta; post village in Randall County.	
Chacon; creek, a left-hand branch of the Rio Grande.	
Chalk; creek, a small left-hand intermittent branch of West Nueces River	Brackett.
Chalk; bluff along East River in Uvalde County	Uvalde.
Chalk; mountain in Erath County	Granbury.
Chalk Mountain; post village in Erath County.	
Chamber; creek, a right-hand branch of Trinity River in northern Texas.	
Chambers; a county in southeastern Texas, with an area of 648 square miles. The population was 3,046; the county seat, Wallisville. The mean magnetic declination in 1900 was 6° 50′. The mean annual rainfall is 52 inches, and the mean annual temperature 70°. The county is traversed by the Gulf and Interstate Railway.	
Chambers; branch, a small right-hand tributary to Bosque River	Stephenville.
Chambers; creek, a right-hand tributary of Trinity River heading in North and South forks of Chambers Creek	Cleburne.
Chambersville; post village in Collin County.	
Chambliss; post village in Collin County.	
Chanayville; town in Harris County; population, 609 (1890).	
Chandler; post village in Henderson County.	
Chandler; peak in Coleman County	Abilene.
Channel; creek, a small left-hand branch of Brushy Creek, tributary to San Gabriel River	Georgetown.
Channing; county seat of Hartley County.	
Chaparrosa; creek, a right-hand intermittent branch of Nueces River	Brackett.
Chapelhill; post village in Washington County.	
Chapman; post village in Rusk County.	
Chappel; post village in San Saba County.	
Charco; post village in Goliad County.	
Charity; post village in Polk County.	
Charleston; post village in Delta County.	
Charlie; post village in Clay County.	
Chase; post village in Bosque County.	
Chatfield; village in Uvalde County	Uvalde.
Chatfield; post village in Navarro County.	
Chatfield; hill in Uvalde County	Uvalde.
Chautauqua; village in Travis County	Austin.
Cheapside; post village in Gonzales County.	
Cheetham; post village in Colorado County.	
Chenango; post village in Brazoria County.	
Cherokee; post village in San Saba County	Llano.

	Atlas sheet.
Cherokee; a northeastern county, with an area of 990 square miles. The population was 25,154; the county seat, Rusk. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 50 inches, and the mean annual temperature 67°. The county is traversed by the International and Great Northern, and the St. Louis Southwestern railroads.	
Cherokee; creek, a right-hand branch of Colorado River	San Saba. Lampasas.
Cherry; canyon in Jeff Davis County	Valentine. Fort Davis.
Cherry; creek, a small left-hand branch of West Nueces River	Nueces.
Cherry Spring; post village in Gillespie County	Kerrville.
Cherry Spring; creek, a head branch of Hickory Creek, tributary to Llano River	Llano.
Chester; post village in Tyler County.	
Chesterville; post village in Colorado County.	
Chicago; post village in Dawson County.	
Chico; town in Wise County; population, 323 (1890).	
Chicota; village in Lamar County; population, 321 (1890).	
Childress; a county situated in the Panhandle, with an area of 660 square miles. The population was 2,138; the county seat, Childress. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 24 inches, and the mean annual temperature 60°. The county is traversed by the Fort Worth and Denver City Railway.	
Childress; county seat of Childress County; population, 692.	
Childress; creek, a right-hand branch of Brazos River	Meridian. Waco.
Chillicothe; post village in Hardeman County.	
Chilton; post village in Falls County	Temple.
Chimney; creek, a right-hand branch of Clear Fork of Brazos River.	Anson. Albany.
China; creek, a small left-hand branch of San Saba River, tributary to the Colorado River	San Saba.
China; creek, a right-hand intermittent branch of Clear Fork of Brazos River	Roby.
China Spring; post village in McLennan County	Waco.
Chinati; mountain group in west Texas near the Rio Grande, in Presidio County.	Ruidosa. Shafter.
Chinati; peak in Chinati Range of mountains; elevation, 7,730 feet	Shafter.
Chireno; village in Nacogdoches County; population, 276 (1890).	
Chisholm; post village in Rockwall County.	
Chisos; a group of volcanic mountains in the bend of the Rio Grande River in western Texas.	
Chispa; creek, a long intermittent stream in the valley east of Tierra Vieja and Van Horn mountains.	Chispa. San Carlos. Marfa.
Chispa; mountain in El Paso County; elevation, 6,215 feet	Chispa.
Chispa; village on Southern Pacific Railroad in Jeff Davis County	Chispa.
Chita; post village in Trinity County.	
Chocolate; bayou, a small stream flowing into an arm of Galveston Bay.	

	Atlas sheet.
Choctaw; post village in Grayson County.	
Chriesman; post village in Burleson County.	
Christian; post village in Palo Pinto County.	
Christian; village in Jack County	Palo Pinto.
Christoval; post village in Tom Green County	San Angelo.
Church; mountain in Nolan County	Sweetwater.
Church Hill; post village in Rusk County.	
Cibolo; creek, a left-hand branch of Rio Grande River	Shafter.
Cibolo; creek, a left-hand branch of San Antonio River in southern Texas.	
Cibolo; post village in Guadalupe County.	
Cidwell; branch, a left-hand branch of Spring Creek, tributary to Brazos River	Weatherford.
Cienega; creek, a right-hand intermittent branch of Alamito Creek, tributary to Rio Grande	Shafter.
Cienega; mountain in Brewster County	Alpine.
Cienega; mountain in Presidio County; elevation, 5,227 feet	Shafter.
Cieneguita; village in Presidio County	Shafter.
Circle; post village in Cherokee County.	
Circleville; post village on San Gabriel River, in Williamson County	Taylor.
Cisco; city on Texas and Pacific and Texas Central railroads, in Eastland County; population, 1,514.	
Cistern; post village in Fayette County.	
C. J.; a mountain in Stevens County	Breckenridge.
Clairemont; county seat of Kent County.	
Clairette; post village in Erath County.	
Clardy; post village in Lamar County.	
Clarendon; county seat of Donley County.	
Clarendon; town in Donley County; population, 949 (1890).	
Clareville; post village in Bee County.	
Clark; post village in Liberty County.	
Clarkson; post village in Milam County.	
Clarksville; county seat of Red River County; population, 2,069.	
Clarksville; village in Travis County; population, 446 (1890).	
Claude; county seat of Armstromg County; population, 285 (1890).	
Clawson; post village in Angelina County.	
Clay; a north central county, with an area of 1,250 square miles. The population was 9,231; the county seat, Henrietta. The mean magnetic declination in 1900 was 8° 20′. The mean annual rainfall is 32 inches, and the mean annual temperature 63°. The county is traversed by the Fort Worth and Denver City, and the Missouri, Kansas and Texas railroads.	
Clay; post village in Burleson County.	
Claybank; post village in Gregg County.	
Clays; creek, a right-hand branch of Little River	Taylor.
Clayton; post village in Panola County.	
Claytonville; post village in Fisher County.	
Clear; bayou, a small steam flowing into Galveston Bay.	
Clear; creek, a small right-hand branch of Big Sunday Creek, tributary to Brazos River	Stephenville.
Clear; creek, a small left-hand intermittent branch of Colorado River	Burnet.

	Atlas sheet.
Clear; creek, a left-hand branch of Colorado River	Coleman. Brady.
Clear; creek, a left-hand branch of Lampasas River, tributary to Little River.	Georgetown. Gatesville.
Clear; creek, a small left-hand branch of North Fork of San Gabriel River	Georgetown.
Clear; creek, a head fork of Trinity River, in northern Texas.	
Clear; creek, a small stream in southeast Texas flowing into Galveston Bay.	
Clear; fork of Brazos River	Roby. Anson. Albany.
Clear Creek; post village in Galveston County.	
Clearlake; post village in Collin County.	
Clear Spring; post village in Guadalupe County.	
Cleburne; county seat of Johnson County, on Buffalo Creek; population, 7,493	Cleburne.
Clemma; post village in Ellis County.	
Cleveland; post village in Liberty County.	
Cleveland; breaks, broken cliffs facing the Rio Grande	Marfa.
Click; post village in Llano County.	
Clifford; post village in Collingsworth County.	
Clifton; post village in Bosque County; population, 204 (1890)	Meridian.
Climax; post village in Collin County.	
Cline; hill in Kinney County; elevation, 1,517 feet	Brackett.
Cline; mountain in Uvalde County	Brackett.
Cline; post village in Uvalde County	Brackett.
Cline; station in Uvalde County	Brackett.
Clinesburg; post village in Montgomery County.	
Clint; post village in El Paso County	El Paso.
Clinton; post village in Hunt County.	
Clio; post village in Brown County.	
Clipper; post village in Kent County.	
Clisbee; post village in Hale County.	
Clodine; post village in Fort Bend County.	
Cloice; branch, a small left-hand branch of South Bosque Creek	Temple.
Clover; post village in Travis County.	
Clyde; post village in Callahan County.	
Coal; creek, a right-hand branch of Sunday Creek, tributary to Colorado River.	Fredericksburg. Llano.
Coal; post village in Limestone County.	
Coal Mines; village in Erath County	Palo Pinto.
Coalson; post village in Fort Bend County.	
Coalville; village in Palo Pinto County	Palo Pinto.
Cobb; creek, a small left-hand branch of Aquilla Creek, tributary to Brazos River	Waco.
Cobb; creek, a small left-hand branch of Hackberry Creek, tributary to Brazos River	Waco.
Cobb; post village in Kaufman County.	
Cochran; a northwestern county with an area of 959 square miles. The population was 25. The mean magnetic declination in 1900 was 11° 15′. The mean annual rainfall is 15 inches, and the mean annual temperature 58°.	
Cochran; post village in Austin County.	

Atlas sheet.

Coesfield; post village in Cooke County.

Coffee; creek, a small right-hand branch of Brazos River...... Palo Pinto.

Coffeeville; post village in Upshur County.

Coffie; branch, a small right-hand branch of South Fork of Chambers Creek, tributary to Trinity River............... Cleburne.

Coit; post village in Limestone County.

Coke; a southwestern county with an area of 850 square miles. The population was 3,430; the county seat, Robert Lee. The mean magnetic declination in 1900 was 9° 45′. The mean annual rainfall is 20 inches, and the mean annual temperature 63°. Hayrick. Sweetwater.

Coke; post village in Wood County.

Cokeland; village in Palo Pinto County....................... Palo Pinto.

Colburn; post village in Wharton County.

Cold; creek, a left-hand branch of Fernando Creek, tributary to Llano River... Llano.

Cold Spring; creek, a head branch of Hickory Creek, tributary to Llano River. Mason. Llano.

Cold Spring; creek, a right-hand tributary to Leon River..... Mason.

Cold Spring; county seat of San Jacinto County; population, 439 (1890).

Coldwater; county seat of Sherman County.

Coleman; a central county with an area of 1,302 square miles. Population, 10,077; the county seat, Coleman. The mean magnetic declination in 1900 was 8° 35′. The mean annual rainfall is 28 inches, and the mean annual temperature 64°. The county is traversed by the Gulf, Colorado and Santa Fe Railway. Eden. Ballinger. Coleman. Abilene.

Coleman; county seat of Coleman County; population, 1,362 .. Coleman

Coleman Junction; a village on the Gulf, Colorado and Santa Fe Railway, in Coleman County............................. Coleman.

Coleta; creek, a right-hand branch of Guadalupe River.

Colfax; post village in Van Zandt County.

Colita; post village in Polk County.

College Station; post village in Brazos County.

Collier; post village in Milam County.

Collin; a north central county with an area of 828 square miles. The population was 50,087; the county seat, McKinney. The mean magnetic declination in 1900 was 9° 05′. The mean annual rainfall is 42 inches, and the mean annual temperature, 64°. The county is traversed by the Gulf, Colorado and Santa Fe, and the Houston and Texas Central railroads.. Dallas.

Collingsworth; a county situated in the Panhandle, with an area of 867 square miles. The population was 1,233; the county seat, Wellington. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 22 inches, and the mean annual temperature 58°. The county has no railroads.

Collins; creek, a right-hand branch of Clear Fork of Brazos River .... Albany.

Collinsville; town in Grayson County; population, 666.

Colmesneil; post village in Tyler County.

Cologne; post village in Goliad County.

	Atlas sheet.
Colony; creek, a left-hand branch of Leon River, tributary to Little River	Eastland.
Colony; post village in Fayette County.	
Colorado; a southeastern county with an area of 948 square miles. The population was 22,203; the county seat, Columbus. The mean magnetic declination in 1900 was 9°. The mean annual rainfall is 45 inches, and the mean annual temperature 68°. The county is traversed by the San Antonio and Arkansas Pass, the Missouri, Kansas and Texas, and the Southern Pacific railroads.	
Colorado; creek, a small stream in southern Texas, flowing into La Guana de la Madre.	
Colorado; river, one of the largest rivers of Texas which heads in the southern part of the Staked Plains, flowing thence southeast to its mouth in Matagorda Bay. The drainage area is 41,220 square miles; the length, 715 miles.	Hayrick. Ballinger. Eden. Brady. San Saba. Lampasas. Burnet. Blanco. Austin. Bastrop.
Colorado; county seat of Mitchell County; population, 1,582, (1890).	
Colquitt; post village in Kaufman County.	
Colston; draw, a shallow valley in Menard County	Fort McKavett.
Coltharps; post village in Houston County.	
Colton; post village in Travis County.	
Columbia; town of Brazoria County; population, 515 (1890).	
Columbus; county seat of Colorado County; population, 1,824.	
Colvin; post village in Lee County.	
Comal; a central county, with an area of 569 square miles. The population was 7,008; the county seat, New Braunfels. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 30 inches, and the mean annual temperature 68°. The county is traversed by the International and Great Northern Railroad	Blanco.
Comanche; a central county, with an area of 828 square miles. The population was 23,009; the county seat, Comanche. The mean magnetic declination in 1900 was 9°. The mean annual rainfall is 30 inches, and the mean annual temperature 65°. The county is traversed by the Fort Worth and Rio Grande, and the Texas Central railroads.	Hamilton. Brownwood. Eastland. Stephenville.
Comanche; creek, a right-hand branch of Sandy Creek, tributary to Cold River.	Fredericksburg. Llano.
Comanche; creek, a left-hand branch of Colorado River	San Saba. Brownwood.
Comanche; county seat of Comanche County; elevation, 2,070	Brownwood.
Comanche; peak in Hood County	Granbury.
Combine; post village in Kaufman County.	
Comet; post village in Marion County.	
Comfort; town in Kendall County; population, 307 (1890).	
Commerce; town in Hunt County; population, 1,800.	
Community; post village in Swisher County.	

	Atlas sheet.
Como; post village in Hopkins County.	
Comstock; post village in Valverde County.	
Concan; post village in Uvalde County	Uvalde.
Concepcion; town in Duval County; population, 984 (1890).	
Concepcion; creek, a small tributary to Alacon Bay, in southern Texas.	
Concho; a central county, with an area of 941 square miles. The population was 1,427; the county seat, Paintrock. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 25 inches, and the mean annual temperature 64°.	Hayrick. San Angelo. Eden. Ballinger.
Concho; a tributary of Colorado River; length, 83 miles	San Angelo. Hayrick. Ballinger.
Concord; post village in Leon County.	
Concrete; post village in Dewitt County.	
Condor; post village in Limestone County.	
Connor; post village in Madison County.	
Conroe; county seat of Montgomery County.	
Content; post village in Runnels County	Abilene.
Contrary; creek, a small right-hand intermittent branch of Brazos River	Granbury.
Converse; post village in Bexar County.	
Cook; slough, a left-hand intermittent tributary of Nueces River	Uvalde.
Cooke; a north central county, with an area of 1,000 square miles. The population was 27,494; the county seat, Gainesville. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 38 inches, and the mean annual temperature 63°. The county is traversed by the Missouri, Kansas and Texas, the Texas and Pacific, and the Gulf, Colorado and Santa Fe railroads.	
Cooke Point; post village in Burleson County.	
Cooks; slough, a left-hand intermittent tributary of Nueces River	Uvalde.
Cookville; post village in Titus County.	
Coon; creek, a small right-hand branch of Brazos River	Waco.
Coon; a mountain in Brown County	Coleman.
Cooper; county seat of Delta County; population, 1,518.	
Coose; branch, a small right-hand branch of South Bosque Creek	Stephenville.
Copano; bay, an arm of Aransas Bay, extending inland.	
Coperas Cove; post village in Coryell County.	
Copeville; post village in Collin County.	
Coplen; post village in Smith County.	
Coppell; post village in Dallas County.	
Copperas; creek, a right-hand branch of Leon River, tributary to Little River.	Eastland. Brownwood.
Copperas; creek, a left-hand tributary of Llano River	Fort McKavett.
Corbet; post village in Navarro County.	
Cordele; post village in Jackson County.	
Cordwood; creek, a right-hand tributary of Clear Fork of Brazos River	Albany.

	Atlas sheet.
Corine; post village in Cherokee County.	
Corinth; post village in Denton County.	
Corley; post village in Bowie County.	
Corn; creek, a right-hand intermittent branch of Colorado River	Brady.
Corn; gap in mountains in Bosque County	Granbury.
Cornhill; post village in Williamson County	Georgetown.
Cornudas; a group of mountains on the boundary line between New Mexico and Texas.	
Corpus Christi; county seat of Nueces County; population, 4,703.	
Corpus Christi; bay, protected by a low sand bar known as Mustang Island.	
Corpus Christi; pass, a gap in the sand bar making an entrance to Corpus Christi Bay.	
Corrigan; village in Polk County; population, 298 (1890).	
Corsicana; county seat of Navarro County; population, 9,313.	
Corwin; post village in Burnet County	Blanco.
Coryell; a central county, with an area of 1,115 square miles. The population was 21,308; the county seat, Gatesville. The mean magnetic declination in 1900 was 8° 45′. The mean annual rainfall is 40 inches, and the mean annual temperature 66°. The county is traversed by the St. Louis Southwestern, and the Gulf, Colorado and Santa Fe railroads.	Lampasas. Meridian. Hamilton.
Coryell; post village on Ranney Creek, in Coryell County	Meridian.
Cosmos; post village in Madison County.	
Cosner; post village in Denton County.	
Cost; post village in Gonzales County.	
Cottle; a northwestern county, with an area of 956 square miles. The population was 1,002; the county seat, Paducah. The mean magnetic declination in 1900 was 9° 55′. The mean annual rainfall is 25 inches, and the mean annual temperature 60°.	
Cotton; post village in Grimes County.	
Cottondale; post village in Wise County.	
Cottongin; post village in Freestone County.	
Cottonwood; creek, a left-hand tributary of Palo Pinto Creek	Breckenridge.
Cottonwood; creek, a right hand tributary of Trinity River	Cleburne.
Cottonwood; creek, a left-hand branch of Mountain Creek, tributary to West Fork of Trinity River.	Fort Worth. Dallas.
Cottonwood; creek, a right-hand branch of Mountain Creek, tributary to West Fork of Trinity River	Cleburne.
Cottonwood; creek, a small right-hand branch of Island Creek, tributary to Trinity River	Cleburne.
Cottonwood; creek, a small left-hand branch of Bitter Creek, tributary to Brazos River	Sweetwater.
Cottonwood; creek, a small left-hand tributary to Colorado River	Sweetwater.
Cottonwood; a right-hand branch of Brazos River	Waco.
Cottonwood; creek, a left-hand branch of Clear Fork of Brazos River	Anson.
Cottonwood; creek, a small left-hand intermittent branch of Sweetwater Creek, tributary to Clear Fork of Brazos River.	Roby.

	Atlas sheet.
Cottonwood; creek, a right-hand tributary to Clear Fork of Brazos River	Roby.
Cottonwood; creek, a left-hand branch of Aquilla Creek, tributary to Brazos River	Cleburne.
Cottonwood; creek, a small right-hand branch of Trinity River	Dallas.
Cottonwood; creek, a small right-hand branch of East Fork of Trinity River	Dallas.
Cottonwood; creek, a right-hand tributary of Trinity River	Dallas.
Cottonwood; creek, a right-hand branch of Big Elm Creek, tributary to Little River	Temple.
Cottonwood; creek, a small left-hand intermittent branch of White Oak Creek, tributary to Pedernales River	Kerrville.
Cottonwood; creek, a small right-hand branch of Kickapoo Creek, tributary to Brazos River	Weatherford.
Cottonwood; creek, a left-hand branch of Wilbarger Creek, tributary to Colorado River.	Austin. Bastrop.
Cottonwood; creek, a right-hand branch of Great Creek, tributary to Bosque River	Stephenville.
Cottonwood; creek, a right-hand branch of Brazos River.	
Cottonwood; creek, a short right-hand branch of Colorado River	San Saba.
Cottonwood; creek, a head branch of Hickory Creek, tributary to Llano River	Llano.
Cottonwood; creek, a small right-hand branch of Pecan Creek, tributary to Llano River	Llano.
Cottonwood; creek, a small right-hand branch of the Canadian River.	
Cottonwood; post village in Callahan County.	
Cotulla; town and county seat of Lasalle County; population, 672 (1890).	
Couch; post village in Karnes County.	
Cougar; post village in Parker County.	
Coulterville; post village in Matagorda County.	
Council; branch, a small right-hand branch of South Bosque River	Stephenville.
Council; branch, a left-hand branch of North Paluxy Creek, tributary to Brazos River	Stephenville.
Coupland; post village in Williamson County.	
Courtney; post village in Grimes County.	
Cousin; creek, a left-hand branch of Red River in the Panhandle.	
Coutchman; post village in Freestone County.	
Cove; creek, a right-hand branch of Brazos River	Breckenridge.
Cove; post village in Chambers County.	
Covington; post village in Hill County	Cleburne.
Cow; a right-hand branch of Sabine River in east Texas.	
Cow; bayou, tributary to Brazos River	Temple.
Cow; branch, a small right-hand branch of Mustang Creek, tributary to Colorado River	Ballinger.
Cow; creek, a small left-hand intermittent branch of Colorado River	Hayrick.
Cow; creek, a left-hand branch of Colorado River	Burnet.

	Atlas sheet.
Cow; creek, a right-hand tributary to Nueces River in southwest Texas.	
Cow; creek, a small right-hand branch of Jim Ned Creek, tributary to Pecan Bayou	Coleman.
Cow; creek, a right-hand branch of Colorado River	Brady.
Cow; creek, a small left-hand branch of Armstrong Creek, tributary to Leon River	Stephenville.
Cow; gap in Brady Mountains through which flows Cow Creek	Brady.
Cowan; post village in Erath County.	
Cowboy; village in San Saba County	Brady.
Cowhouse; creek, a right-hand branch of Leon River	Brownwood. Hamilton. Lampasas. Gatesville.
Cox; gap in Comanche County	Brownwood.
Coxville; post village in Bastrop County.	
Coy; post village in Mills County.	
Coyote; creek, a right-hand branch of Elm Creek, tributary to Colorado River.	Sweetwater. Hayrick. Ballinger.
Cozart; post village in Panola County.	
Crabapple; creek, a right-hand branch of Sandy Creek, tributary to Colorado River.	Fredericksburg. Llano.
Crabapple; post village in Gillespie County.	
Craft; post village in Cherokee County.	
Crafton; post village in Wise County.	
Craig; post village in Rusk County.	
Crandall; town in Kaufman County; population, 251 (1890).	
Crane; a southwestern county, with an area of 850 square miles. The population was 51. The mean magnetic declination in 1900 was 10° 20′. The mean annual rainfall is 16 inches, and the mean annual temperature 60°.	
Crane; bayou, a small stream flowing into the head of Galveston Bay.	
Crane Mill; post village in Comal County.	
Cranfill Gap; post village in Bosque County	Meridian.
Cravens; post village in Red River County.	
Crawford; post village in McLennan County; population, 443	Waco.
Crecy; post village in Trinity County.	
Creechville; post village in Ellis County.	
Creedmoor; post village in Travis County.	
Creek; post village in Houston County.	
Crenshaw; post village in Falls County.	
Crescent; post village in Titus County.	
Cresson; post village on the Fort Worth and Rio Grande, and the Gulf, Colorado and Santa Fe railroads, in Hood County	Weatherford.
Crews; post village in Runnels County.	
Crisp; post village in Ellis County.	
Crockery; creek, a small right-hand branch of Kickapoo Creek, tributary to Brazos River	Stephenville.
Crockett; a southwestern county, with an area of 3,004 square miles. The population was 1,591; the county seat, Ozona. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 20 inches, and the mean annual temperature 65°	Sherwood.

Atlas sheet.

Crockett; county seat of Houston County; population, 2,612.

Crooked; creek, a small right-hand intermittent branch of West Nueces Creek, tributary to the Nueces River .... Nueces.

Crosby; a northwestern county, with an area of 984 square miles. The population was 788; the county seat, Emma. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 20 inches, and the mean annual temperature 60°.

Crosby; post village in Harris County.

Cross; branch, a small right-hand branch of Paluxy Creek, tributary to Brazos River .... Granbury.

Cross; post village in Grimes County.

Crosscut; post village in Brown County.

Crossplains; post village in Callahan County.

Cross Roads; village in Hill County .... Cleburne.

Crosstimbers; post village in Johnson County.

Crowell; county seat of Foard County.

Crowley; post village on the Gulf, Colorado and Santa Fe Railway in Tarrant County .... Fort Worth.

Crown; post village in Atascosa County.

Crush; post village in Milam County.

Cryercreek; post village in Navarro County.

Cryers; branch, a left-hand branch of Browns Creek, tributary to Pecan Bayou .... Brownwood.

Crystal Falls; post village in Stephens County on Clear Fork of Brazos River .... Breckenridge.

Cuba; post village in Johnson County .... Cleburne.

Cuero; county seat of Dewitt County; population, 3,442.

Cuesta del Burro; range, with a gentle slope on the northeast and a cliff on the north and south .... Marfa.

Cuevitas; post village in Starr County.

Culberson; post village in Cass County.

Culleoka; post village in Collin County.

Culp; post village in Hill County.

Cumby; post village in Hopkins County.

Cundiff; post village in Jack County.

Curlew; post village in Floyd County.

Currycomb; branch, a small left-hand branch of Sabana River, tributary to Little River .... Eastland.

Curtis; post village in Eastland County.

Cusseta; post village in Cass County.

Custer; post village in Cooke County.

Cuthand; post village in Red River County.

Cuthbert; post village in Mitchell County.

Cutoff; mountain in Hamilton County .... Meridian.

Cyclone; post village in Bell County.

Cypress; bayou, a tributary of San Jacinto River.

Cypress; creek, a right-hand branch of the Sabine River in east Texas.

Cypress; creek, a right-hand tributary of the Neches River.

Cypress; creek, a small left-hand branch of Colorado River ... Austin.

Cypress; creek, a left-hand branch of Pedernales River .... Blanco.

Cypress Mill; village on Cypress Creek in Blanco County ..... Blanco.

Atlas sheet.

Cypresstop; post village in Harris County.

Cyril; post village in Rusk County.

Dacus; post village in Montgomery County.

Daingerfield; county seat of Morris County; population, 553 (1890).

Daisy; post village in Rains County.

Dalberg; village on the Southern Pacific Railroad, in El Paso County .... Bosque.

Dalby Springs; post village in Bowie County.

Dale; post village in Caldwell County.

Daley; creek, a small right-hand intermittent branch of East Nueces River, tributary to the Nueces .... Nueces.

Dallam; a county situated in the Panhandle, with an area of 1,463 square miles. The population was 146; the county seat, Texline. The mean magnetic declination in 1900 was 12°. The mean annual rainfall is 15 inches, and the mean annual temperature 55°. The county is traversed by the Fort Worth and Denver City, and the Colorado and Southern railroads.

Dallardsville; post village in Polk County.

Dallas; a north central county, with an area of 900 square miles. The population was 82,726, the county seat, Dallas. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 65 inches, and the mean annual temperature 42°. The county is traversed by the Gulf, Colorado and Sante Fe, the Missouri, Kansas and Texas, the St. Louis Southwestern, the Texas and Pacific, the Houston and Texas Central, and the Texas Trunk railroads. .... Fort Worth. Dallas.

Dallas; city and railroad center on Trinity River, county seat of Dallas County; population, 42,638 .... Dallas.

Dalton; post village in Cass County.

Daly; post village in Houston County.

Damon; post village in Brazoria County.

Dan; post village in Wise County.

Dancer; peak in Llano County; elevation, 1,686 feet .... Llano.

Danevang; post village in Wharton County.

Daniel; post village in Houston County.

Daphne; post village in Franklin County.

Dargan; post village in Panola County.

Dark; post village in Scurry County.

Dark Hollow; small left-hand branch of Leon River, tributary to Little River .... Eastland.

Dark Valley; creek, a left-hand branch of Brazos River .... Palo Pinto.

Darrs; creek, a right-hand branch of Little River .... Taylor.

Darwin; post village in Webb County.

Daryl; post village in Harrison County.

Datura; post village in Limestone County.

Daugherty; post village in Kaufman County.

Dauphin; post village in Henderson County.

Davenport; post village in Red River County.

Davilla; town of Milam County; population, 241 (1890) .... Taylor.

Davis; creek, a small left-hand intermittent branch of Brazos River .... Breckenridge.

	Atlas sheet.
Davis; hill in Travis County	Austin.
Davis; mountains, a range of mountains in Jeff Davis County	Valentine. Fort Davis.
Davis; post village in Lamar County.	
Davy; post village in Dewitt County.	
Dawson; a northwestern county, with an area of 900 square miles. The population was 37. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 18 inches, and the mean annual temperature 60°.	
Dawson; village of Navarro County; population, 365 (1890).	
Day; post village in Grayson County.	
Dayton; post village in Liberty County.	
Deadhorse; creek, a small right-hand branch of South Fork of Leon River, tributary to Little River	Eastland.
Deadhorse; small right-hand branch of Hackberry Creek, tributary to Brazos River	Waco.
Deadman; creek, a right-hand branch of Clear Fork of Brazos River.	Abilene. Anson.
Dead Mans; hole, a valley in Hays County	Blanco.
Deadwood; post village in Panola County.	
Deaf Smith; a Panhandle county, with an area of 1,477 square miles. The population was 843; the county seat, Hereford. The mean magnetic declination in 1900 was 11° 30′. The mean annual rainfall is 15 inches, and the mean annual temperature 55°. The county is traversed by the Pecos and Northern Texas Railway.	
Deanville; post village in Burleson County.	
Deaton; post village in Polk County.	
Deatsville; village in Travis County	Austin.
Deberry; post village in Panola County.	
Decatur; county seat of Wise County; population, 1,562.	
Decker; creek, a right-hand branch of Gilliland Creek, tributary to Colorado River	Austin.
Decker; post village in Nolan County.	
De Cordova; bend in Brazos River, in Hunt and Johnson counties	Granbury.
Decros; point of sand bar on the entrance to Matagorda Bay.	
Deep; creek, a right-hand tributary of Clear Fork of Brazos River	Albany.
Deep; creek, a right-hand intermittent branch of Colorado River	Brady.
Deepwater; post village in Harris County.	
Deer; creek, a right-hand tributary of Brazos River	Temple.
Deer; creek, a left-hand branch of Colorado River	Burnet.
Deer; creek, a left-hand branch of Village Creek, tributary to West Fork of Trinity River	Fort Worth.
Deer; creek, a right-hand tributary of San Saba River	Mason.
Deer; creek, a head branch of Frio River.	
Deerpark; post village in Harris County.	
Dekalb; town in Bowie County; population, 420 (1890).	
Delaware; river, a small right-hand branch of Pecos River in west Texas.	
Delba; post village in Fannin County.	

	Atlas sheet.
De Leon; city on the Texas Central Railroad, in Comanche County; population, 807	Eastland.
Delfina; post village in Hidalgo County.	
Delhi; post village in Caldwell County.	
Delia; post village in Limestone County.	
Delma; post village in Newton County.	
Delray; post village in Panola County.	
Delrio; post village and county seat of Valverde County.	
Delta; a northeastern county, with an area of 266 square miles. The population was 15,249; the county seat, Cooper. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 45 inches, and the mean annual temperature 64°. The county is traversed by the Gulf, Colorado and Santa Fe, the Texas Midland, and the St. Louis Southwestern railroads.	
Delvalle; post village in Travis County	Austin.
Democrat; post village in Comanche County.	
Dempsy; post village in Cass County.	
Denison; city in Grayson County; population, 11,807.	
Denman; post village in Van Zandt County.	
Denning; post village in San Augustine County.	
Dennis; post village in Parker County.	
Denny; post village in Falls County.	
Denson Spring; post village in Anderson County.	
Dent; post village in Hunt County.	
Denton; a north central county, with an area of 865 square miles. The population was 28,318; the county seat, Denton. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 40 inches, and the mean annual temperature 64°. The county is traversed by the Gulf, Colorado and Sante Fe, the Texas and Pacific, and the Missouri, Kansas and Texas railroads.	Dallas. Fort Worth.
Denton; creek, a right-hand branch of Elm Fork of Trinity River.	Fort Worth. Dallas.
Denton; county seat of Denton County; population, 4,187.	
Denver; post village in Montague County.	
Deport; town in Lamar County; population, 274 (1890).	
Derby; post village in Frio County.	
Derden; post village in Hill County	Cleburne.
Desdimonia; post village in Eastland County	Eastland.
Desert; post village in Collin County.	
Desoto; post village in Dallas County	Dallas.
Dessau; post village in Travis County	Austin.
Detroit; town in Red River County; population, 604 (1890).	
Devers; post village in Liberty County.	
Devil; ridge, a mountain in El Paso County	Sierra Blanco.
Devil; river, a left-hand branch of the Rio Grande, mainly in Valverde County.	
Devils Courthouse; a peak in Tom Green County	Hayrick.
Devine; post village in Medina County.	
Dew; post village in Freestone County.	
Dewalt; post village in Fort Bend County.	
Deweyville; post village in Newton County.	

Atlas sheet.

Dewitt; a southern county, with an area of 880 square miles. The population was 21,311; the county seat, Cuero. The mean magnetic declination in 1900 was 7° 40′. The mean annual rainfall is 40 inches, and the mean annual temperature 70°. The county is traversed by the Gulf, Western Texas and Pacific, the San Antonio and Aransas Pass, and the Southern Pacific railroads.

Dewville; post village in Gonzales County.

Dexter; village in Cooke County; population, 226 (1890).

D'Hanis; post village in Medina County; population, 266 (1890).

Dial; post village in Fannin County.

Dialville; post village in Cherokee County.

Diana; post village in Upshur County.

Diantha; post village of Foard County.

Diboll; post village in Angelina County.

Dicey; post village in Parker County.

Dickens; county seat of Dickens County.

Dickens; a northwestern county, with an area of 918 square miles. The population was 1,151; the county seat, Dickens. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 20 inches, and the mean annual temperature 60°.

Dickinson; post village in Galveston County.

Dido; post village in Walker County .... Fort Worth.

Dietz; post village in Guadalupe County.

Dike; post village in Hopkins County.

Dilley; post village in Frio County.

Dilworth; post village in Gonzales County.

Dimebox; post village in Lee County.

Dimmit; a southern county, with an area of 1,164 square miles. The population was 1,106; the county seat, Carrizo Springs. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 25 inches, and the mean annual temperature 70°.

Dimmitt; county seat of Castro County.

Dinah; river, a right-hand branch of San Antonio River, in southern Texas.

Dinero; post village in Live Oak County.

Dingler; post village in Comanche County .... Hamilton.

Direct; post village in Lamar County.

Dirgin; post village in Rusk County.

Ditto; post village in Atascosa County.

Dixie; post village in Lamar County.

Dixon; post village in Hunt County.

Doans; post village in Wilbarger County.

Dobyville; village on Burnet River .... Burnet.

Dockum; village in Dickens County; population, 61 (1890).

Dodd; town in Fannin County; population, 369.

Dode; post village in Floyd County.

Dodge; post village in Walker County.

Dodson; post village in Houston County.

Dog; creek, a left-hand tributary to Llano River .... Mason.

Dolce; post village in Shelby County.

	Atlas sheet.
Dolive; post village in San Jacinto County.	
Dolores; creek, a left-hand branch of the Rio Grande.	
Dolph; post village in Grimes County.	
Dome; peak in El Paso County	Sierra Blanca.
Domingo; village in Presidio County	Polvo.
Donahoe; creek, a right-hand branch of Little River.	
Donahoe; post village in Bell County.	
Donaldson; creek, a left-hand branch of Sulphur Creek, tributary to Little River	Lampasas.
Donelton; post village in Hunt County.	
Donie; post village in Freestone county.	
Donley; a county situated in the Panhandle, with an area of 878 square miles. The population was 2,756; the county seat, Clarendon. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 22 inches, and the mean annual temperature 58°. The county is traversed by the Fort Worth and Denver City Railway.	
Donna; post village in Collin County.	
Dora; post village in Nolan County; elevation, 2,500 feet	Sweetwater.
Dorras; post village in Fisher County.	
Dos Alamos; village in El Paso County	Salt Basin.
Dot; post village in Falls County.	
Double; creek, a small left-hand branch of Pecan Bayou, tributary to Colorado River	Brownwood.
Double; mountains in Palo Pinto County	Palo Pinto.
Double; mountain in Stephens County	Breckenridge.
Double Bayou; post village in Chambers County.	
Double Horn; post village in Burnet County	Burnet.
Double Mountain; post village in Stonewall County.	
Double Mountain Fork; head branch of Brazos River	Roby.
Doucette; post village in Tyler County.	
Douglass; post village in Nacogdoches County.	
Douglassville; post village in Cass County.	
Dove; post village in Tarrant County.	
Dove; creek, a right-hand tributary of Comanche River	Sherwood.
Dowell; post village in Fisher County.	
Downing; post village in Comanche County.	
Downsville; post village in McLennan County.	
Dozier; creek, a small left-hand branch of West Fork of Trinity River	Fort Worth.
Dozier; post village in Collingsworth County.	
Drane; post village in Navarro County.	
Dreary Hollow; creek, a small right-hand branch of Little Llano Creek	Llano.
Dresden; post village in Navarro County.	
Dressy; post village in Callahan County.	
Driftwood; post village in Hays County.	
Dripping Springs; post village in Hays County	Blanco.
Driscoll; post village in Nueces County.	
Drop; post village in Denton County.	
Drummond; post village in Young County.	
Drury; post village in San Jacinto County.	
Dry; branch, a small left-hand intermittent branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Breckenridge.

	Atlas sheet.
Dry; branch, a right-hand branch of Sandy Creek, tributary to the Clear Fork of Brazos River	Breckenridge.
Dry; creek, a left-hand branch of Rock Creek, tributary to Brazos River.	Weatherford. Palo Pinto.
Dry; creek, a small right-hand intermittent branch of East Nueces River, tributary to Nueces River	Nueces.
Dry; creek, a left-hand intermittent branch of East Nueces River, tributary to the Nueces	Nueces.
Dry; creek, a small right-hand branch of Aquilla Creek, tributary to Brazos River	Waco.
Dry; creek, a small left-hand branch of Bull Hide Creek, tributary to Brazos River	Temple.
Dry; creek, a right-hand branch of Colorado River	Austin.
Dry; creek, a small right-hand intermittent branch of Clear Fork of Brazos River	Roby.
Dry; creek, a right-hand intermittent branch of Concho River	Hayrick. San Angelo.
Dry; creek, a right-hand intermittent branch of South Concho River	San Angelo.
Dry; creek, a small right-hand intermittent branch of Kickapoo Creek, tributary to Colorado River	Hayrick.
Dry; a left-hand intermittent branch of Middle Concho River	Sherwood.
Dry; fork, a small right-hand intermittent branch of Armstrong Creek, tributary to Leon River	Stephenville.
Dry; river, a small right-hand branch of the Canadian River.	
Dry; draw, a shallow valley in Edwards County	Rock Springs.
Dry Blanket; creek, a left-hand branch of Blanket Creek, tributary to Pecan Bayou	Brownwood.
Dry Brushy; creek, a left-hand branch of Running Brushy Creek	Georgetown.
Dry California; creek, a right-hand intermittent branch of California Creek, tributary to Clear Fork of Brazos River	Roby.
Dryden; post village in Pecos County.	
Dryer; post village in Gonzales County.	
Dry Frio; river, a left-hand branch of Frio River, tributary to the Nueces River	Uvalde.
Dry Hollow; creek, a small right-hand branch of North Grape Creek, tributary to Pedernales River	Fredericksburg.
Dry Lipan; creek, a large left-hand intermittent branch of Lipan Creek, tributary to Concho River	San Angelo.
Dry Sycamore; creek, a right-hand intermittent branch of Sycamore Creek, tributary to West Nueces River	Nueces.
Dubina; post village in Fayette County.	
Dublin; city in Erath County; population, 2,370	Stephenville.
Dubois; post village in Refugio County.	
Duck; creek, a right-hand branch of Sabine River in northeast Texas.	
Duck; creek, a right-hand branch of Navasota River.	
Duck; creek, a right-hand branch of Concho River, tributary to the Colorado.	Eden. Ballinger.
Duck; creek, a right-hand branch of East Fork of Trinity River	Dallas.
Dudley; post village in Callahan County.	
Duffau; post village on Duffau Creek, in Erath County	Stephenville.

	Atlas sheet.
Duffau Wells; village on Duffau Creek, in Erath County	Stephenville.
Duke; post village in Fort Bend County.	
Dulaney; post village in Hunt County.	
Dulin; post village in Brown County.	
Dulls Ranch; post village in Lasalle County.	
Dumas; county seat of Moore County.	
Dumont; post village in King County.	
Dump; post village in Collin County.	
Dunbar; post village in Rains County.	
Duncan; creek, a right-hand branch of Rush Creek, tributary to Little River	Brownwood.
Duncanville; post village on the Gulf, Colorado and Santa Fe Railway, in Dallas County	Dallas.
Dundee; post village in Archer County.	
Dunlap; post village in Travis County	Austin.
Dunlay; post village in Medina County.	
Dunn; post village in Scurry County.	
Duplex; post village in Fannin County.	
Dupree; village in Hays County.	
Durango; post village in Falls County	Temple.
Duster; post village in Comanche County.	
Dutch; branch, a left-hand branch of Clear Fork of Trinity River, tributary to West Fork of Trinity River.	Weatherford. Fort Worth.
Dutch; post village in Smith County.	
Duval; a southern county, with an area of 1,887 square miles. The population was 8,483; the county seat, San Diego. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 30 inches, and the mean annual temperature 73°. The county is traversed by the Mexican National Railroad.	
Duval; village on the International and Great Northern Railroad, in Travis County	Austin.
Dye; post village in Montague County.	
Dysart; post village in Presidio County.	
Eagle; creek, a left-hand tributary to Colorado River	Sweetwater.
Eagle; creek, a right-hand branch of Brazos River	Palo Pinto.
Eagle; creek, a small right-hand intermittent branch of Leon River, tributary to Little River	Meridian.
Eagle; mountain in Callahan County	Abilene.
Eagle; mountain in El Paso County; elevation, 7,510 feet	Eagle Mountain.
Eagle; spring in El Paso County	Eagle Mountain.
Eagle Cove; post village in Callahan County	Abilene.
Eagle Flat; village on the Texas and Pacific Railway, in El Paso County	Sierra Blanca.
Eagleford; post village in Dallas County.	
Eagle Lake; town in Colorado County; population, 1,107.	
Eagle Pass; county seat of Maverick County.	
Eagle Springs; post village on Onion Creek in Coryell County	Temple.
Earle; post village in Bexar County.	
Earls; village on Texas and Pacific Railway in Parker County	Weatherford.
Early; post village in Cooke County.	
Earnest; post village in Sterling County.	
East; fork, a left-hand branch of Sandy Creek, tributary to Colorado River	Bastrop.

	Atlas sheet.
East; peak in Taylor County	Abilene.
East Bernard; post village in Wharton County.	
East Bosque; river, a left-hand branch of Bosque River	Granbury.
East China; creek, a small right-hand intermittent branch of China Creek, tributary to Clear Fork of Brazos River	Roby.
East Copperas; creek, a left-hand branch of Copperas Creek, tributary to Llano River	Fort McKavett.
East Cottonwood; creek, a small right-hand intermittent branch of Cottonwood Creek, tributary to Clear Fork of Brazos River	Roby.
Easterly; post village in Robertson County.	
East Grindstone; creek, a left-hand branch of Grindstone Creek, tributary to Brazos River	Weatherford.
East Hamilton; post village in Shelby County.	
Eastland; county seat of Eastland County; population, 596.	
Eastland; a north central county, with an area of 947 square miles. The population was 17,971; the county seat, Eastland. The mean magnetic declination in 1900 was 9°. The mean annual rainfall is 30 inches, and the mean annual temperature 65°. The county is traversed by the Texas and Pacific, and the Texas Central railroads.	Stephenville. Eastland. Albany. Breckenridge.
East Poor; hollow, a valley in Schleicher County	Fort McKavett.
East Sanches; creek, a small left-hand branch of Sanches Creek, tributary to Brazos River	Weatherford.
Ebony; post village in Mills County.	
Echo; post village in Jack County.	
Ector; post village in Fannin County.	
Ector; a southwestern county, with an area of 976 square miles. The population was 381; the county seat, Odessa. The mean magnetic declination in 1900 was 10° 20′. The mean annual rainfall is 16 inches, and the mean annual temperature 60°. The county is traversed by the Texas and Pacific Railway.	
Eddy; village on the Missouri, Kansas and Texas Railway, in McLennan County	Temple.
Eden; post village in Concho County	Eden.
Edgar; post village in Dewitt County.	
Edge; post village in Brazos County.	
Edgewood; post village in Van Zandt County.	
Edgeworth; post village in Bell County.	
Edhube; post village in Fannin County.	
Edith; post village in Coke County.	
Edna; county seat of Jackson County; population, 537 (1890).	
Edom; post village in Van Zandt County.	
Edwards; a southwestern county, with an area of 2,408 square miles. The population was 3,108; the county seat, Rock Springs. The mean magnetic declination is 9°. The mean annual rainfall is 20 inches, and the mean annual temperature 65°.	
Edwards; branch, a small left-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Albany.
Edwards Water Hole; village in Uvalde County	Brackett.
Egan; post village on the Missouri, Kansas and Texas Railway, in Johnson County	Cleburne.

	Atlas sheet.
Eight Mile; water hole, a reservoir in Leona River in Uvalde County	Uvalde.
Elam; post village in Dallas County	Dallas.
Elbert; post village in Throckmorton County.	
Elcampo; post village in Wharton County.	
Elderville; post village in Gregg County.	
Eldorado; post village in Schleicher County.	
Eldridge; post village in Gray County.	
Elephant; peak in west Texas.	
Elephant; mountain in Brewster County	Alpine.
Elgin; post village on the Houston and Texas Central Railroad, in Bastrop County	Bastrop.
Eliasville; post village in Young County	Breckenridge.
Elk; post village in McLennan County.	
Elkhart; post village in Anderson County.	
Elkhart; creek, a left-hand branch of Trinity River, in east Texas.	
Ellinger; post village in Fayette County.	
Elliott; creek, a left-hand branch of Colorado River	San Saba. Lampasas.
Elliott; post village in Robertson County.	
Ellis; a north central county, with an area of 1,066 square miles. The population was 50,059; the county seat, Waxahachi. The mean magnetic declination in 1900 was 8° 15′. The annual rainfall is 42 inches, and the mean annual temperature 65°. The county is traversed by the Gulf, Colorado and Santa Fe, the Fort Worth and New Orleans, the Texas Midland, the Central Texas and Northwestern, the Missouri, Kansas and Texas, and the Houston and Texas Central railroads.	Cleburne. Forth Worth. Dallas.
Ellis; village on West Nueces River, in Edwards County; elevation, 783 feet	Nueces.
Ellison; branch, a small right-hand branch of Leon River, tributary to Little River	Eastland.
Ellsworth; post village in Grayson County.	
Elm; a mountain in Kinney County; elevation, 1,449 feet	Brackett.
Elm; branch, a small left-hand tributary of Brazos River	Palo Pinto
Elm; creek, a left-hand branch of Llano River, tributary to the Colorado	Llano.
Elm; creek, a left-hand branch of Colorado River	Abilene.
Elm; creek, a left-hand branch of Colorado River	Ballinger.
Elm; creek, a small left-hand branch of Aquilla Creek, tributary to Brazos River	Waco.
Elm; creek, a small left-hand intermittent branch of East Nueces River, tributary to Nueces River	Uvalde.
Elm; creek, a small left-hand intermittent branch of Hog Creek, tributary to Pecan Bayou	Brownwood.
Elm; creek, a left-hand branch of Wilbarger Creek, tributary to Colorado River	Bastrop.
Elm; creek, a right-hand branch of Colorado River	Eden. Brady.
Elm; creek, a right-hand tributary of Sabana River	Eastland.

Atlas sheet.

Elm; creek, a large right-hand branch of Clear Fork of Brazos River. Sweetwater. Abilene. Anson.

Elm; creek, a head stream of Nueces River in southern Texas.

Elm; creek, a small right-hand branch of Pecan Bayou........ Coleman.

Elm; creek, a right-hand intermittent branch of Chacon Creek, tributary to Nueces River................................. Brackett.

Elm; creek, a left-hand tributary of Rio Grande River .... Brackett.

Elm; creek, a right-hand tributary to Nueces River in southwest Texas.

Elm; fork, a head branch of the Red River in the Panhandle.

Elm; mountain in Kinney County; elevation 1,449 feet.

Elm; post village in Karnes County.

Elmdale; a village in Taylor County on the Texas and Pacific Railway.. Abilene.

Elmendorf; post village in Bexar County.

Elm Grove; a village in Hess County....................... Austin.

Elmir; branch, a small left-hand branch of North Paluxy Creek, tributary to Brazos River .... Stephenville.

Elm Mott; a village on the Missouri, Kansas and Texas Railway, in Hill County .... Waco.

Elm Mott; a small left-hand branch of Brazos River.......... Granbury.

Elm Mott; post village in McLennan County.

El Muerto; peak in Jeff Davis County .... Valentine.

Elmo; post village in Kaufman County.

Elmont; post village in Grayson County.

Elm View; post village in Grayson County.

El Paso; city; county seat of El Paso County; on Rio Grande and at the junction of the White Oaks and the Southern Pacific railroads; elevation, 3,720 feet; population, 15,906. El Paso.

El Paso; a western county, with an area of 9,353 square miles. The population was 24,886; the county seat, El Paso. The mean magnetic declination in 1900 was 11° 30′. The mean annual rainfall is 10 inches, and the mean annual temperature 60°. The county is traversed by the Texas and Pacific, the Southern Pacific, the Gulf, Colorado and Santa Fe, the El Paso and Northeastern, and the Mexico Central railroads. Fort Hancock. Salt Basin. El Paso. Rio Grande. Eagle Mountain. Chispa. Valentine. Sierra Blanca.

Elroy; post village in Travis County.

Elwood; post village in Fannin County.

Ely; post village in Fannin County.

Elysian Fields; post village in Harrison County

Elysium; post village in Bastrop County.

Emberson; post village in Lamar County.

Emblem; post village in Hopkins County.

Emery; a mountain peak at the bend of the Rio Grande in west Texas.

Emilee; post village in Tyler County.

Eminence; post village in Chambers County.

Emma; county seat in Crosby County.

Emmet; post village in Navarro County.

Emory; county seat of Rains County; population, 353 (1890).

Emporia; post village in Angelina County.

	Atlas sheet.
Encampment; creek, a small right-hand branch of the Canadian River.	
Enchanted; rock, a hill in Llano and Gillespie counties; elevation, 1,815 feet	Llano.
Encinal; town of Lasalle County; population, 562 (1890).	
Energy; post village in Comanche County.	
Engle; post village in Fayette County.	
English; post village in Red River County.	
Enless; post village in Tarrant County.	
Enloe; post village in Delta County.	
Ennis; city in Ellis County; population, 4,919.	
Enon; post village in Tarrant County	Fort Worth.
Ensign; post village in Ellis County.	
Eolian; post village in Stephens County	Albany.
Epps; creek, a tributary to Llano River	Fort McKavett.
Era; post village in Cooke County.	
Erath; a north central county, with an area of 1,110 square miles. The population was 29,966; county seat, Stephenville. The mean magnetic declination in 1900 was 8° 50′. The mean annual rainfall is 35 inches, and the mean annual temperature 65°. The county is traversed by the Houston and Texas Central and the Fort Worth and Rio Grande railroads.	
Erath; post village in McLennan County.	
Erin; post village in Jasper County.	
Erudia; post village in Collin County.	
Erwin; post village in Grimes County.	
Eskota; post village in Fisher County.	
Esperanza; post village in Montgomery County.	
Esperanza; river, a tributary in Frio River in southern Texas.	
Espuela; post village in Dickens County.	
Essex; post village in Upshur County.	
Estacado; post village in Crosby County.	
Estelle; post village in Dallas County	Fort Worth.
Estelline; post village in Hall County.	
Ethel; post village in Grayson County.	
Etholen; village on the Galveston, Harrisburg and San Antonio Railroad; elevation, 4,648 feet	Sierra Blanca.
Etoile; post village in Nacogdoches County.	
Eula; post village in Callahan County.	
Eulalie; post village in Rusk County.	
Eulogy; post village in Bosque County.	
Eulogy; village in Brazos County.	
Eureka; post village in Navarro County.	
Eustace; post village in Henderson County.	
Evanspoint; post village in Hopkins County.	
Evansville; peak in Palo Pinto County	Breckenridge.
Evant; post village in Coryell County	Lampasas.
Evelyn; post village in Travis County	Austin.
Evergreen; post village in San Jacinto County.	
Everitt; post village in San Jacinto County.	
Evie; post village in San Augustine County.	
Ewell; post village in Upshur County.	

	Atlas sheet.
Exile; post village in Uvalde County.	
Exray; post village in Erath County.	
Eylan; town in Bowie County; population, 200 (1890).	
Eyrie; post village in Ellis County.	
Ezzeli; post village in Lavaca County.	
Fabens; village on the Southern Pacific Railroad and on the Rio Grande River, in El Paso County	Rio Grande.
Fairbanks; post village in Harris County.	
Fairfield; county seat of Freestone County; population, 499 (1890).	
Fairland; post village in Burnet County.	
Fairlie; post village in Hunt County.	
Fairmount; post village in Sabine County.	
Fairplay; post village in Panola County.	
Fairview; post village in Wilson County.	
Fairy; post village in Hamilton County	Meridian.
Falfurrias; post village in Starr County.	
Falkner; post village in Aransas County.	
Fall; creek, a left-hand branch of Brazos River	Weatherford. Granbury.
Fall; creek, a right-hand intermittent branch of Bosque River.	Meridian.
Fall; creek, a small left-hand branch of Pedernales River, tributary to Colorado River	Blanco.
Fall; creek, a right-hand branch of East Fork of James River, tributary to Leon River	Kerrville.
Fall; creek, a small left-hand branch of Johnson Creek, tributary to Guadalupe River	Kerrville.
Falls; a southeastern county, with an area of 844 square miles. The population was 33,342; the county seat, Marlin. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 42 inches, and the mean annual temperature 67°. The county is traversed by the San Antonio and Aransas Pass, and the Houston and Texas Central railroads.	
Falls; creek, a right-hand branch of Colorado River	Llano. Burnet.
Falls; post village in Karnes County.	
Falls; village on Station Branch, in Johnson County	Granbury.
Fanchon; post village in Swisher County.	
Fannin; a northeastern county, with an area of 940 square miles. The population was 51,793; the county seat, Bonham. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 42 inches, and the mean annual temperature 64°. The county is traversed by the Texas and Pacific, the St. Louis Southwestern, and the Missouri, Kansas and Texas railroads.	
Fannin; post village in Goliad County.	
Fant; post village in Cass County.	
Fargo; post village in Wilbarger County.	
Farmer; post village in Young County.	
Farmers; branch, a small left-hand branch of Elm Fork of Trinity River	Dallas.
Farmers Branch; post village on the Dallas and Wichita Railroad, in Dallas County	Dallas.

Atlas sheet.

Farmersville; post village in Collin County; population, 1,856.

Farmington; post village in Grayson County.

Farr; post village in McLennan County.

Farrar; post village in Limestone County.

Farris; creek, a small left-hand branch of Steele Creek, tributary to Brazos River.. Granbury.

Farrsville; post village in Newton County.

Fate; post village in Rockwall County.

Faught; post village in Lamar County.

Fay; post village in Leon County.

Fay; village on Southern Pacific Railroad, in El Paso County.. Chispa.

Fayburg; post village in Collin County.

Fayette; a southeastern county, with an area of 992 square miles. The population was 36,542; the county seat, Lagrange. The mean magnetic declination in 1900 was 8° 20′. The mean annual rainfall was 42 inches, and the mean annual temperature 68°. The county is traversed by the San Antonio and Aransas Pass, the Southern Pacific, and the Missouri, Kansas and Texas railroads.

Fayetteville; post village in Fayette County; population, 269 (1890).

Fazenda; post village in Upshur County.

Fedor; post village in Lee County................................ Bastrop.

Felder; post village in Washington County.

Fentress; post village in Caldwell County.

Ferguson; post village in Tarrant County.

Fernando; creek, a left-hand branch of Llano River, tributary to the Colorado River.................................... Llano.

Ferris; post village in Ellis County on the Houston and Texas Central Railway.. Dallas.

Festus; post village in Moore County.

Field; creek, a small left-hand branch of Fernando Creek, tributary to Llano River.................................... Llano.

Field Creek; post village in Llano County.

Fields Store; post village in Waller County.

Files; post village in Hill County.

Files Valley; village on Valley Branch, in Hill County....... Cleburne.

Fincastle; post village in Henderson County.

Finis; post village in Jack County.

Fink; post village in Grayson County.

Finlay; a group of mountains in western Texas.

Finlay; mountains in El Paso County .... Fort Hancock.

Finlay; village on the Southern Pacific Railroad, in El Paso County.. Fort Hancock.

Finley; post village in Dallas County.

Fischer Store; post village in Comal County.

Fish; creek, a right-hand branch of Clear Fork of Brazos River.. Anson. Albany.

Fish; creek, a left-hand branch of Mountain Creek, tributary to West Fork of Trinity River. Fort Worth. Dallas.

Fisher; a village in Fisher County; elevation 1,920 feet .... Roby.

	Atlas sheet.
Fisher; a northwestern county, with an area of 836 square miles. The population was 3,708; the county seat, Roby. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 20 inches, and the mean annual temperature 62°. The county has no railroads.	
Fisher; post village on the Missouri, Kansas and Texas Railway, in Dallas county	Dallas.
Fish Spring; branch, a small right-hand branch of Mountain Creek, tributary to West Fork of Trinity River	Cleburne.
Fiskville; post village on Little Walnut Creek, in Travis County	Austin.
Fitzgerald; creek, a right-hand branch of Brady Creek, tributary to San Saba River	Eden.
Fitzgerald; post village in Anderson County.	
Fitzhugh; post village in Hays County.	
Fivemile; creek, a small right-hand, intermittent branch of West Nueces River, tributary to the Nueces	Nueces.
Fivemile; creek, a right-hand branch of Trinity River in Dallas County	Dallas.
Fivemile; post village in Dallas County.	
Flag; branch, a small left-hand tributary of Clear Fork of Brazos River	Anson.
Flag; creek, a right-hand branch of East Bosque River, tributary to Bosque River	Granbury.
Flag; creek, a small left-hand branch of Pedernales River	Kerrville.
Flag Creek; gap, in mountains in Erath County	Granbury.
Flanagan; post village in Rusk County.	
Flat; creek, a right-hand branch of the Neches, in eastern Texas.	
Flat; creek, a right-hand branch of the Sabine River, in eastern Texas.	
Flat; creek, a small right-hand branch of Pedernales River	Blanco.
Flat; creek, a left-hand branch of Leon River	Stephenville. Eastland.
Flat; creek, a small right-hand intermittent branch of West Nueces River, tributary to the Nueces River	Nueces.
Flat; creek, a right-hand branch of Brazos River	Temple.
Flat; post village in Coryell County.	
Flat; post village in Coryell County.	
Flatonia; city in Fayette County; population, 1,210.	
Flat Rock; creek, a small left-hand branch of Pinto Creek, tributary to Palo Pinto Creek	Breckenridge.
Flat Rock; creek, a small right-hand branch of Brazos River	Granbury.
Flat Top; a hill in Shackelford and Stephens counties	Albany.
Flat Top; a hill in Callahan County.	
Flat Top; a mountain in Jones County; elevation, 1,798 feet	Roby.
Flat Top; mountain in Eastland County	Eastland
Flat Top; peak in Lampasas County; elevation, 1,541 feet	Lampasas.
Fleming; post village in Comanche County.	
Fleming; village in Hamilton County	Hamilton.
Fletcher; post village in Milam County.	
Flint; post village in Smith County.	
Flo; post village in Leon County.	
Florence; town in Williamson County; population, 263 (1890)	Georgetown.
Floresville; county seat of Wilson County; population, 895.	

	Atlas sheet.
Floyd; a northwestern county, with an area of 1,036 square miles. The population was 2,020; the county seat, Floydada. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 20 inches, and the mean annual temperature 60°. The county has no railroads.	
Floyd; post village in Hunt County.	
Floydada; county seat of Floyd County.	
Fly Gap; a village in Mason County	Mason.
Flynn; post village in Cass County.	
Foard; a north central county, with an area of 636 square miles. The population was 1,568; the county seat, Crowell. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 25 inches, and the mean annual temperature 61°.	
Foncine; post village in Collin County.	
Ford; post village in Van Zandt County.	
Fordtram; post village in Victoria County.	
Foremans; village on Sandy Creek, in Llano County	Burnet.
Forest; post village in Cherokee County.	
Forestburg; post village in Montgomery County.	
Forney; town in Kaufman County; population, 811 (1890).	
Forreston; post village in Ellis County.	
Fort Bend; a southeastern county, with an area of 897 square miles. The population was 16,538; the county seat, Richmond. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 48 inches, and the mean annual temperature 68°. The county is traversed by the Southern Pacific, The Gulf, Colorado and Santa Fe, the International and Great Northern, and the San Antonio and Aransas Pass railroads.	
Fort Bliss; fort on White Oaks Railroad, in El Paso County	El Paso.
Fort Chadbourne; post village on Oak Creek, in Coke County	Sweetwater.
Fort Clark; village in Kinney County	Brackett.
Fort Davis; county seat of Jeff Davis County	Fort Davis.
Fort Graham; post village in Hill County.	
Fort Griffin; post village in Shackelford County, on Clear Fork of Brazos River	Albany.
Fort Hancock; post village in El Paso County	Fort Hancock.
Fortin; village in Presidio County	Shafter.
Fort McKavett; post village in Menard County; elevation, 2,155 feet	Fort McKavett.
Fort Prairie; village in Travis County	Austin.
Fort Quitman; fort in El Paso County	Fort Hancock.
Fort Sam Houston; post village in Bexar County.	
Fort Spunky; post village in Hood County	Granbury.
Fort Stockton; county seat in Pecos County.	
Fort Worth; the county seat of Tarrant County, situated at the junction of West and Clear forks of Trinity River and on the Texas and Pacific, the Fort Worth and Rio Grande, the Gulf, Colorado and Santa Fe, the Houston and Texas Central, the Arkansas Central, and the Fort Worth and Denver City railroads; population, 26,688	Fort Worth.
Foster; branch, a small right-hand branch of South Cow Bayou	Temple.
Foster; post village in Fort Bend County.	

Atlas sheet.

Fosterville; post village in Anderson County.

Fourmile Draw; shallow valley in Presidio County .... Marfa.

Fowler; post village in Bosque County.

Fowler; village on the Houston and Texas Central Railroad, in Hill County .... Cleburne.

Fox; mountain in Llano County .... Llano.

Fox; post village in Henderson County.

Foyle; creek, a right-hand branch of Clear Fork of Brazos River .... Albany.

Frank; post village in Fannin County.

Frankford; post village in Collin County .... Dallas.

Franklin; a short mountain range in western Texas, near El Paso.

Franklin; county seat of Robertson County; population, 665 (1890).

Franklin; a northeastern county, with an area of 325 square miles. The population was 8,674; the county seat, Mount Vernon. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 48 inches, and the mean annual temperature 64°. The county is traversed by the St. Louis Southwestern, and the Missouri, Kansas and Texas railroads.

Franklin; mountains in El Paso County; elevation, 7,140 feet. El Paso.

Frazier; canyon in Jeff Davis County .... Fort Davis.

Frazier; right-hand branch of Red River in northeast Texas.

Fredericksburg; county seat of Gillespie County; population, 1,532 (1890) .... Fredericksburg.

Fredonia; town in Mason County; population, 273 (1890).

Fredonia; village in San Saba County .... Mason.

Free; post village in Pecos County.

Freeland; post village on Camp Creek in Johnson County .... Granbury.

Freemound; post village in Cooke County.

Freestone; a northeastern county, with an area of 947 square miles. The population was 18,910; the county seat, Fairfield. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 45 inches, and the mean annual temperature 67°. The county is traversed by the Houston and Texas Central Railroad.

Frelsburg; post village in Colorado County.

French; creek, a small right-hand intermittent branch of the Nueces River .... Brackett.

French; post village in Madison County.

Frenchman; hills in Presidio County .... Marfa.

Frenstat; post village in Burleson County.

Fresnos; canyon, a small left-hand branch of the Rio Grande River in Presidio County.

Freyburg; post village in Fayette County.

Friendship; post village in Harrison County.

Friendswood; post village in Galveston County.

Frio; a southern county, with an area of 1,064 square miles. The population was 4,200; the county seat, Pearsall. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 28 inches, and the mean annual temperature 70°. The county is traversed by the International and Great Northern Railroad.

	Atlas sheet.
Frio; hill in Uvalde County	Uvalde.
Frio; river, a left-hand branch of Nueces River heading in Uvalde County	Uvalde.
Friotown; post village in Frio County.	
Frog-Pond; creek, a right-hand branch of Kickapoo Creek, tributary to Concho River	San Angelo.
Frosa; post village in Limestone County.	
Frost; post village in Navarro County; population, 621.	
Fruit; post village in Smith County.	
Fruitland; post village in Montague County.	
Fry Pan; valley in Kinney County	Brackett.
Fulbright; post village in Red River County.	
Fulda; post village in Baylor County.	
Fulp; post village in Fannin County.	
Fulshear; post village in Fort Bend County.	
Fulton; post village in Van Zandt County.	
Furrh; post village in Panola County.	
Fussell; post village in Rusk County.	
Fuzzy; creek, a left-hand branch of Concho River, tributary to Colorado River	Ballinger.
Gabriel Mills; post village on North Fork of San Gabriel River, in Williamson County	Georgetown.
Gage; post village in Grayson County.	
Gages; creek, a left-hand branch of Brazos River	Breckenridge.
Gail; county seat of Borden County.	
Gaines; a northwestern county, with an area of 1,590 square miles. The population was 55. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 15 inches, and the mean annual temperature 58°.	
Gainesville; county seat of Cooke County; population, 7,874.	
Gainsville; village on Honey Creek, in Llano County	Llano.
Gallaghers Ranch; post village in Medina County.	
Gallinas; post village in Atascosa County.	
Galveston; a bay on the coast of Texas, shut in by two sand bars between which is a narrow entrance artificially deepened.	
Galveston; a southeastern county, with an area of 438 square miles. The population was 44,116; the county seat, Galveston. The mean magnetic declination in 1900 was 7° 50′. The mean annual rainfall is 50 inches, and the mean annual temperature 70°. The county is traversed by the Gulf, Colorado and Santa Fe, the Houston and Texas Central, the International and Great Northern, the Missouri, Kansas and Texas, the Galveston, Houston and Northern, and the Gulf and Interstate of Texas railroads.	
Galveston; city, seaport, and county seat of Galveston County; population, 37,789.	
Ganado; post village in Jackson County.	
Gano; post village in Williamson County.	
Gap; creek, a small left-hand branch of Elm Creek, tributary to Colorado River	Ballinger.
Gap; creek, a small right-hand branch of Salt Creek, tributary to Pecan Bayou	Brownwood.
Gap; post village in Comanche County.	

	Atlas sheet.
Garcias; post village in Starr County.	
Garcitas; creek, a small stream flowing into Matagorda Bay.	
Garden City; county seat of Glasscock County.	
Garden Valley; post village in Smith County.	
Gardner; post village in Milam County.	
Garfield; post village in Travis County.	
Garfield; village in Bastrop County	Austin.
Garland; city at junction of the Missouri, Kansas and Texas with the Gulf, Colorado and Santa Fe railroads, in Dallas County; population, 819	Dallas.
Garner; post village in Parker County.	
Garrett; post village in Ellis County.	
Garretts Bluff; post village in Lamar County.	
Garrison; village in Nacogdoches County; population, 530.	
Garvin; post village in Wise County.	
Gary; creek, a small left-hand branch of Neil Creek, tributary to Bosque River	Meridian.
Gary; post village in Panola County.	
Garza; a northwestern county, with an area of 821 square miles. The population was 185; the mean magnetic declination 10° 30′. The mean annual rainfall is 20 inches, and the mean annual temperature 60°.	
Garza; post village in Denton County.	
Gaston; post village in Fort Bend County.	
Gatesville; county seat of Coryell County; population, 1,865.	
Gatling; post village in Stonewall County.	
Gato; creek, a right-hand intermittent tributary of Nueces River	Brackett.
Guadalupe; a river of southern Texas, heading in Kerr County and flowing in a generally southerly direction to San Antonio Bay	Kerrville.
Gause; post village in Milam County.	
Gayhill; post village in Washington County.	
Gazelle; post village in Hall County.	
Geneva; post village in Sabine County.	
Genoa; post village in Harris County.	
Gent; post village in Cherokee County.	
Gentry Mill; village on Warring Creek in Hamilton County	Hamilton.
George; creek, a small left-hand branch of Brazos River	Granbury.
Georges Creek; post village in Somervell County.	
Georgetown; county seat of Williamson County, situated on the International and Great Northern Railroad; and at junction of North and South forks of San Gabriel River; population, 2,790	Georgetown.
Gerald; post village in McLennan County.	
Germantown; post village in Goliad County.	
Gerome; post village in Henderson County.	
Geronimo; creek, a small right-hand intermittent branch of West Nueces River, tributary to the Nueces River	Nueces.
Geronimo; post village in Guadalupe County.	
Gertie; post village in Tarrant County.	
Gertrudes; post village in Jack County.	
Gettysburg; peak in Presidio County; elevation, 4,897 feet	San Carlos.

	Atlas sheet.
Gholson; post village in McLennan County	Waco.
Gibbs; village in Dallas County	Fort Worth.
Gibson; creek, a left-hand branch of Navasota River.	
Gibson; creek, a right-hand branch of Palo Pinto Creek, tributary to Brazos River.	Stephenville. Palo Pinto.
Gibson; post village in Lamar County.	
Gibtown; post village in Jack County.	
Giddings; county seat of Lee County; population, 1,203 (1890).	
Gilbert; creek, a small right-hand branch of Red River in northern Texas.	
Giles; post village in Donley County.	
Gilesburg; post village in Travis County.	
Gill; post village in Harrison County.	
Gill; small canyon in Presidio County	San Carlos.
Gilleland; creek, a left-hand branch of Colorado River	Austin.
Gillespie; a central county, with an area of 1,140 square miles. The population was 8,229; the county seat, Fredericksburg. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 28 inches, and the mean annual temperature 65°.	Llano. Fredericksburg. Mason. Kerrville.
Gills; creek, a small left-hand branch of Colorado River	Bastrop.
Gilmer; town in Upshur County; population, 591 (1890).	
Gilmore; creek, a small right-hand branch of Bosque River, tributary to the Brazos	Hamilton.
Gindale; post village in Bell County.	
Given; creek, a left-hand branch of Clear Fork of Brazos River, tributary to Brazos River	Albany.
Givens; post village in Lamar County.	
Gladewater; post village in Gregg County.	
Gladish; post village in Waller County.	
Gladstone; post village in Walker County.	
Gladys; post village in Montague County.	
Glasscock; a southwestern county, with an area of 952 square miles. The population was 286; the county seat, Garden City. The mean magnetic declination in 1900 was 10° 15′. The mean annual rainfall is 18 inches, and the mean annual temperature 61°.	
Gleam; post village in Lee County.	
Gleckler; post village in Lavaca County.	
Glencove; post village on Horde Creek in Coleman County	Ballinger.
Glendale; post village in Trinity County.	
Glenfawn; post village in Rusk County.	
Glenflora; post village in Wharton County.	
Glenn; creek, a left-hand intermittent branch of Rio Grande River	Chispa.
Glenn; creek a small left-hand branch of the Rio Grande, in El Paso County.	
Glenrose; county seat of Somervell County; population, 400 (1890)	Granbury.
Glenwood; post village in Upshur County.	
Glidden; post village in Colorado County.	
Globe; post village in Lamar County.	
Glory; post village in Lamar County.	

	Atlas sheet.
Goat; creek, a left-hand tributary to Rio Grande River	Albany.
Goat; creek, a small left-hand branch of Guadalupe River	Kerrville.
Goat; mountain in Brewster County; elevation, 6,500 feet	Albany.
Gober; post village in Fannin County.	
Godley; post village in Johnson County.	
Goforth; post village in Hess County	Austin.
Golden; post village in Wood County.	
Goldenrod; post village in Wharton County.	
Goldthwaite; county seat of Mills County, situated on the Gulf, Colorado and Santa Fe Railway; population, 1,282	San Saba.
Goliad; a southern county, with an area of 817 square miles. The population was 8,310; the county seat, Goliad. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 40 inches, and the mean annual temperature 70°. The county is traversed by the Southern Pacific, and the Gulf, Western Texas and Pacific railroads.	
Goliad; county seat of Goliad County.	
Golindo; post village in McLennan County	Temple.
Gonzales; a central county, with an area of 1,079 square miles. The population was 28,882; the county seat, Gonzales. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 40 inches, and the mean annual temperature 69°. The county is traversed by the Southern Pacific, and the San Antonio and Aransas Pass railroads.	
Gonzales; county seat of Gonzales County; population, 4,297.	
Gonzales; creek, a right-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River, heads in West, Middle, and East forks	Breckenridge.
Gonzales; creek, a right-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Breckenridge.
Good; post village in Hays County.	
Goode; triangulation station in Edwards County	Nueces.
Goodman; post village in Bastrop County.	
Goodnight; post village in Armstrong County.	
Goodrich; post village in Polk County.	
Goodsonville; post village in Anderson County.	
Goodwin; post village in Comal County.	
Goolesboro; post village in Titus County.	
Gordon; post village on the Texas and Pacific Railroad, in Palo Pinto County; population, 378 (1890)	Palo Pinto.
Gordonville; post village in Grayson County; population, 182 (1890).	
Goree; post village in Knox County.	
Gorman; post village in Eastland County.	
Goshen; post village in Henderson County.	
Gossett; post village in Kaufman County.	
Gough; post village in Delta County.	
Gould; post village in Rusk County.	
Government; water hole, a reservoir on Turkey Creek, in Kinney County	Brackett.
Graball; post village in Washington County.	
Grady; post village in Fisher County.	
Graford; post village in Palo Pinto County.	

Atlas sheet.

Graham; county seat of Young County; population, 878.

Granada; post village in Hutchinson County.

Granbury; county seat of Hood County; population, 1,410 .... Granbury.

Grandfalls; post village in Ward County.

Grand Prairie; post village on the Texas and Pacific Railway, in Dallas County .... Dallas.

Grand Sabine; creek, a right-hand branch of Sabine River, in northeast Texas.

Grand Saline; post village in Van Zandt County.

Grandview; village in Johnson County; population, 713.

Grandview; village on the Missouri, Kansas and Texas Railway, in Hill County .... Cleburne.

Granger; post village on the Missouri Pacific Railway, in Williamson County .... Taylor.

Granite Mountain; post village in Burnet County.

Grannys; branch, a small right-hand branch of South Fork of Leon River, tributary to Little River .... Eastland.

Grant; post village in Burleson County.

Grape; creek, a small right-hand branch of the Canadian River, in the Panhandle.

Grape; creek, a left-hand branch of Colorado River .... Ballinger.

Grape; creek, a small right-hand tributary to San Saba River .. Mason.

Grapeland; post village in Houston County.

Grapevine; post village on the Dallas, Pacific and Southern, and the Central Arkansas railroads, in Tarrant County; population, 442 (1890) .... Fort Worth.

Grass; creek, a small right-hand branch of Brazos River .... Granbury.

Grass; a hollow in Edwards County .... Nueces.

Grass; a valley in Kinney County .... Brackett.

Grassy; branch, a small right-hand branch of Mountain Creek, tributary to West Fork of Trinity River .... Cleburne.

Grassy; creek, a small left-hand branch of Pin Oak Creek, tributary to Colorado River .... Bastrop.

Grassyville; post village in Bastrop County.

Gravelly; creek, a right-hand branch of Pin Oak Creek, tributary to Colorado River .... Bastrop.

Gravis; post village in Williamson County.

Gray; a county situated in the Panhandle, with an area of 860 square miles. The population was 480. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 22 inches, and the mean annual temperature 58°. The county is traversed by the Gulf, Colorado and Santa Fe Railway.

Gray; post village in Eastland County.

Graybill; post village in Collin County.

Graydon; post village in Chambers County.

Grayrock; post village in Franklin County.

Grayson; a north central county, with an area of 1,012 square miles. The population was 63,661; the county seat, Sherman. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 40 inches, and the mean annual temperature 64°. The county is traversed by the Missouri, Kansas and Texas, the Gulf, Colorado and Santa Fe, the Texas and Pacific, the Houston and Texas Central, and the St. Louis Southwestern railroads.

	Atlas sheet.
Grayton; village on the Galveston, Harrisburg and San Antonio Railway, in El Paso County; elevation, 4,300 feet	Sierra Blanca.
Great; creek, a right-hand branch of Bosque Creek	Stephenville.
Green; a lake in Zavalla County	Uvalde.
Green; a lake in Edwards County	Rock Springs.
Green; mountain in Uvalde County	Uvalde.
Greenbriar; creek, a left-hand branch of Pecan Bayou	Coleman.
Greenhill; post village in Titus County.	
Greenock; post village in Bosque County	Waco.
Greenville; county seat of Hunt County; population, 6,860.	
Greenvine; post village in Washington County.	
Greenway; post village in Johnson County.	
Greenwood; post village in Wise County.	
Greer; mountains in Shackelford County	Albany.
Greeson; post village in Henderson County.	
Gregg; a northeastern county, with an area of 287 square miles. The population was 12,343; the county seat, Longview. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 50 inches, and the mean annual temperature 65°. The county is traversed by the Texas and Pacific, and the International and Great Northern railroads.	
Gregg; post village in Travis County	Austin.
Gregory; post village in San Patricio County.	
Grice; post village in Upshur County.	
Gridiron; creek, a small right-hand branch of Double Horn Creek, tributary to Colorado River	Burnet.
Griffin; creek, a small right-hand intermittent branch of West Nueces River, tributary to Nueces River	Nueces.
Griffin; post village in Cherokee County.	
Grimes; a southeastern county, with an area of 770 square miles. The population was 26,106; the county seat, Anderson. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 45 inches, and the mean annual temperature 68°. The county is traversed by the Gulf, Colorado and Santa Fe, and the Houston and Texas Central railroads.	
Grindstone; creek, a left-hand branch of Brazos River	Weatherford.
Groesbeck; county seat of Limestone County; population, 1,462.	
Grosvenor; post village in Brown County.	
Grove; post village in Collin County.	
Groveland; post village in Jack County.	
Groveton; county seat of Trinity County; population, 1,076 (1890).	
Grulla; post village in Starr County.	
Grundyville; post village in Lampasas County.	
Guadalupe; a central county, with an area of 717 square miles. The population was 21,385; the county seat, Seguin. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 38 inches, and the mean annual temperature 68°. The county is traversed by the Southern Pacific Railroad.	
Guadalupe; mountains north of the broad ranges of western Texas, forming the divide west of the Pecos River.	

Atlas sheet.

Guadalupe; post village in Victoria County.

Guadalupe; river of southern Texas, flowing into San Antonio Bay.

Guion; post village in Taylor County .... Abilene.

Gunsight; mountain in Eastland County .... Breckenridge.

Gunsight; post village in Stephens County; population, 255 (1890).

Gunter; post village in Grayson County.

Gurley; post village in Falls County.

Gustine; post village in Comanche County.

Guthrie; county seat in King County.

Guy; post village in Fort Bend County.

Guyler; post village in Montgomery County.

Guys Store; post village in Leon County.

Gyp; creek, a right-hand branch of Double Mountain Fork, tributary to the head branch of Brazos River.

Gypsum; post village in Hardeman County.

Hackberry; creek, a left-hand branch of Brazos River.......... Cleburne. Waco.

Hackberry; creek, a small right-hand branch of Blanco River, tributary to the Nueces River .... Uvalde.

Hackberry; creek, a right-hand branch of East Nueces River.. Rock Springs. Nueces.

Hackberry; creek, a right-hand tributary of the Nueces River.. Nueces.

Hackberry; creek, a small left-hand branch of Armstrong Creek, tributary to Leon River.................................. Stephenville.

Hackberry; creek, a left-hand intermittent branch of West Nueces River, tributary to the Nueces River................ Nueces.

Hackberry; creek, a small right-hand branch of Elm Fork of Trinity River .... Dallas.

Hackberry; post village in Lavaca County.

Hagansport; post village in Franklin County.

Hagerville; post village in Houston County.

Hahn; post village in Wharton County.

Hail; post village in Fannin County.

Hailey; post village in Harrison County.

Hainesville; post village in Wood County.

Hairston; creek, a small left-hand branch of Hamilton Creek.. Burnet.

Halbert; post village in Shelby County.

Hale; a northwestern county, with an area of 1,036 square miles. The population was 1,680; the county seat, Plainview. The mean magnetic declination in 1900 was 11° 20′. The mean annual rainfall is 20 inches, and the mean annual temperature 58°.

Hale; village on the Gulf, Colorado and Santa Fe Railway, in Dallas County... Dallas.

Hale Center; post village in Hale County.

Halesboro; post village in Red River County.

Haley; branch, a right-hand branch of Nolands River, tributary to Brazos River. Cleburne. Granbury.

Halifax; creek, a left-hand branch of Blanco River........... Austin.

Atlas sheet.

Hall; a county situated in the Panhandle, with an area of 868 square miles. The population was 1,670; the county seat, Memphis. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 22 inches, and the mean annual temperature 58°. The county is traversed by the Fort Worth and Denver City Railway.

Halletsville; county seat of Lavaca County; population, 1,457.

Hallsville; post village in Harrison County.

Halsted; post village in Fayette County.

Hamilton; a central county, with an area of 858 square miles. The population was 13,520; the county seat, Hamilton. The mean magnetic declination in 1900 was 8° 45′. The mean annual rainfall is 35 inches, and the mean annual temperature 66°. The county is traversed by the Texas Central Railroad. San Saba. Lampasas. Hamilton. Meridian.

Hamilton; county seat of Hamilton County; population, 726 (1890) .... Hamilton.

Hamilton; creek, a right-hand branch of Colorado River...... Burnet.

Hamilton; creek, a small right-hand branch of Pedernales River.......... Blanco.

Hamlet; post village in Angelina County.

Hammond; post village in Robertson County.

Hamon; post village in Gonzales County.

Hampton; post village in Tyler County.

Hampshire; post village in Jefferson County.

Hancock; post village in Limestone County.

Handley; post village in Tarrant County.

Hanna; post village in Wise County.

Hanna; valley on the Colorado River, Mills County .... San Saba.

Hannibal; post village in Erath County.

Hanover; post village in Milam County.

Hansford; a county situated in the Panhandle, with an area of 860 square miles. The population was 167; the county seat, Hansford. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 22 inches, and the mean annual temperature 57°.

Hansford; county seat of Hansford County.

Hanson; post village in Fort Bend County.

Happy; post village in Swisher County.

Harbin; post village in Erath County.

Hardeman; a north-central county, with an area of 532 square miles. The population was 3,634; the county seat, Quanah. The mean magnetic declination in 1900 was 10° 15′. The mean annual rainfall is 25 inches, and the mean annual temperature 60°. The county is traversed by the Fort Worth and Denver City Railway.

Hardeman; post village in Matagorda County.

Harden; branch, a small left-hand branch of Brady Creek, tributary to San Saba River .... Eden.

Hardin; a southeastern county, with an area of 844 square miles. The population was 5,049; the county seat, Kountze. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 52 inches, and the mean annual temperature 68°. The county is traversed by the Southern Pacific, and the Texas and New Orleans railroads.

	Atlas sheet.
Hardin; post village in Hardin County.	
Hardins Store; post village in Leon County.	
Hardy; post village in Montague County.	
Hare; post village in Williamson County.	
Hargrove; post village in Somervell County.	
Harkey; knobs, hills in San Saba County; elevation, 1,500 feet	San Saba.
Harlanville; post village in Falls County.	
Harlem; post village in Fort Bend County.	
Harleton; post village in Harrison County.	
Harmon; post village in Lamar County.	
Harmony Hill; post village in Rusk County.	
Harp; post village in Freestone County.	
Harper; post village in Gillespie County	Kerrville.
Harpersville; post village in Stephens County.	
Harriet; mountain in Erath County	Stephenville.
Harris; a southeastern county, with an area of 1,761 square miles. The population was 63,786; the county seat, Houston. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 50 inches, and the mean annual temperature 68°. The county is traversed by the Missouri, Kansas and Texas, the San Antonio and Aransas Pass, the Houston, East and West Texas, the International and Great Northern, the Houston and Texas Central, the Southern Pacific, the Gulf, Colorado and Santa Fe, the Galveston, Houston and Henderson, the Galveston, Houston and Northern, and the Texas and New Orleans railroads.	
Harris; peak in Palo Pinto County	Palo Pinto.
Harris; right-hand tributary of Bosque River	Temple. Waco.
Harris; creek, a left-hand branch of South Bosque River, tributary to North Bosque River	Temple.
Harris; village in Edwards County	Rock Springs.
Harrisburg; post village in Harris County.	
Harris Ferry; post village in Red River County.	
Harrison; post village in McLennan County.	
Harrison; a northeastern county, with an area of 873 square miles. The population was 31,878; the county seat, Marshall. The mean magnetic declination in 1900 was 7°. The mean annual rainfall is 50 inches, and the mean annual temperature 65°. The county is traversed by the Texas and Pacific, the Texas Southern, and the Texas, Sabine Valley and Northwestern railroads.	
Harris Ranch; village in Coke County	Hayrick.
Harrold; post village in Wilbarger County.	
Hart; post village in Castro County.	
Hartburg; post village in Newton County.	
Hartley; a county situated in the Panhandle, with an area of 1,460 square miles. The population was 377; the county seat, Channing. The mean magnetic declination in 1900 was 11° 30′. The mean annual rainfall is 15 inches, and the mean annual temperature 55°. The county is traversed by the Fort Worth and Denver City Railway.	
Hartley; post village in Hartley County.	

	Atlas sheet.
Hartzo; post village in Marion County.	
Harvester; post village in Waller County.	
Harvey; post village in Brazos County.	
Harwood; post village in Gonzales County.	
Haskell; county seat of Haskell County; population, 745 (1890).	
Haskell; a north central county, with an area of 843 square miles. The population was 2,637; the county seat, Haskell. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 25 inches, and the mean annual temperature 62°	Anson.
Haslet; post village on the Gulf, Colorado and Santa Fe Railway, in Tarrant County	Fort Worth.
Hasse; post village in Comanche County.	
Hastings; post village in Kendall County.	
Hatton; post village in Van Zandt County.	
Haughts Store; village in Dallas County	Dallas.
Havana; post village in Hidalgo County.	
Hawcreek; post village in Fayette County.	
Hawkins; post village in Wood County.	
Hawkinsville; post village in Matagorda County.	
Hawley; post village in Matagorda County.	
Hay; creek, a left-hand branch of Home Creek, tributary to Colorado River.	Brady. Coleman.
Hayden; post village in Van Zandt County.	
Hayes; post village in Robertson County.	
Haymond; post village in Brewster County.	
Hayrick; mountain, a hill in Coke County	Hayrick.
Hayrick; village in Coke County	Hayrick.
Hays; a central county, with an area of 647 square miles. The population was 14,142; the county seat, San Marcos. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 37 inches, and the mean annual temperature 68°. The county is traversed by the International and Great Northern, and the Missouri, Kansas and Texas railroads.	Austin. Blanco.
Haysland; post village in Panola County.	
Hazledell; post village in Comanche County	Hamilton.
Headsville; post village in Robertson County.	
Hearne; town in Robertson County; population, 2,129.	
Heath; post village in Rockwall County.	
Heaton; post village in Dewitt County.	
Hebbronville; post village in Duval County.	
Hedwigs Hill; post village in Mason County	Mason.
Hegar; post village in Waller County.	
Heidenheimer; post village on the Gulf, Colorado and Santa Fe Railway, in Bell County	Temple.
Helena; post village in Karnes County.	
Hellemans; post village in Bexar County.	
Helotes; post village in Bexar County.	
Help; post village in Bosque County.	
Hembrie; post village in Crockett County.	
Hemming; post village in Cooke County.	

Atlas sheet.

Hemphill; a county situated in the Panhandle, with an area of 860 square miles. The population was 815; the county seat, Canadian. The mean magnetic declination in 1900 was 10° 25′. The mean annual rainfall is 22 inches, and the mean annual temperature 58°. The county is traversed by the Southern Kansas Railway of Texas, on the Santa Fe route.

Hemphill; county seat of Sabine County.

Hempstead; county seat of Waller County; population, 1,671 (1890).

Henderson; a northeastern county, with an area of 940 square miles. The population was 19,970; the county seat, Athens. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 45 inches, and the mean annual temperature 66°. The county is traversed by the St. Louis Southwestern Railway.

Henderson; county seat of Rusk County; population, 1,536 (1890).

Henkhaus; post village in Lavaca County.

Henly; post village in Hess County .... Blanco.

Hennessey; post village in Madison County.

Henning; creek, a small left-hand tributary of Armstrong Creek, tributary to Leon River .... Stephenville.

Henrietta; county seat of Clay County; population, 1,614.

Henrietta; creek, a right-hand tributary of Trinity River ...... Fort Worth.

Henry; post village in Ellis County.

Henshaw; creek, a small right-hand branch of North Paluxy Creek, tributary to Brazos River .... Stephenville.

Hereford; county seat of Deaf Smith County.

Herman; creek, a left-hand tributary to Leon River .... Mason.

Hermitage; post village in Cass County.

Hermoson; post village in McLennan County.

Herwig; post village in Blanco County.

Hester; post village in Navarro County.

Hewitt; post village on the Missouri, Kansas and Texas Railway, in McLennan County .... Temple.

Hext; post village in Menard County.

Hickey; post village in Panola County.

Hickory; creek, a left-hand branch of Elm Fork of Trinity River, in Dallas County .... Dallas.

Hickory; creek, a left-hand branch of Pedernales River, tributary to the Colorado .... Blanco.

Hickory; creek, a right-hand branch of Llano River, tributary to the Colorado River .... Llano

Hickory; creek, a right-hand tributary of the Neches River.

Hickory; fork, a branch of Clear Fork of Trinity River, in northern Texas.

Hickory; mountains in Llano County .... Llano

Hickory Creek; post village in Hunt County.

Hickston; post village in Gonzales County.

Hico; city on the Texas Central Railroad and on Bosque River, tributary to the Brazos River; population, 1,480 .... Hamilton.

Hidalgo; county seat of Hidalgo County; population, 389 (1890).

	Atlas sheet.
Hidalgo; a southern county, with an area of 2,328 square miles. The population was 6,837; the county seat, Hidalgo. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 29 inches, and the mean annual temperature 75°.	
Higgins; a gap in Coryell and Lampasas counties	Lampasas.
Higgins; post village in Lipscomb County.	
High; post village in Lamar County.	
High Hill; post village in Fayette County.	
High Island; post village in Galveston County.	
Highland; post village in Erath County	Stephenville.
High Prairie; post village in Madison County.	
Hill; a north central county, with an area of 1,006 square miles. The population was 41,355; the county seat, Hillsboro. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 42 inches, and the mean annual temperature 66°. The county is traversed by the Gulf, Colorado and Santa Fe, the Missouri, Kansas and Texas, the Texas Central, and the St. Louis Southwestern railroads.	Cleburne. Waco-Granbury.
Hill; creek, a right-hand branch of Brazos River heading in North and South forks	Granbury.
Hill Creek; village in Bosque County	Granbury.
Hillcrest; post village in Floyd County.	
Hillendahl; post village in Harris County.	
Hillger; post village in Fannin County.	
Hillister; post village in Tyler County.	
Hillje; post village in Wharton County.	
Hillsboro; county seat of Hill County, situated at the junction of the Missouri, Kansas and Texas, and the St. Louis Southwestern railroads; population, 5,346	Cleburne.
Hillside; post village in McLennan County.	
Hills Prairie; post village in Bastrop County	Bastrop.
Hinde; post village in Crockett County.	
Hiner; village in Parker County	Weatherford.
Hines; post village in Taylor County.	
Hinkles Ferry; post village in Brazoria County.	
Hiram; post village in Kaufman County.	
Hisaw; creek, a right-hand intermittent branch of Valley Creek, tributary to Colorado River	Hayrick.
Hitchcock; post village in Galveston County.	
Hitson; branch, a small left-hand branch of Post Oak Branch, tributary to Brazos River	Breckenridge.
Hitson; branch, a small right-hand branch of Gonzales Creek, tributary to Brazos River	Breckenridge.
Hitson; creek, a small right-hand intermittent branch of Double Mountain Fork of Brazos River	Roby.
Hitson; post village in Fisher County; elevation, 1,821 feet	Roby.
Hix; post village in Burleson County.	
Hobart; post village in Eastland County.	
Hobbs; post village in Fisher County.	
Hobson; post village in Karnes County.	
Hochheim; post village in Dewitt County.	

Atlas sheet.

Hockley; a northwestern county, with an area of 977 square miles. The population was 44. The mean magnetic declination in 1900 was 11° 15′. The mean annual rainfall is 17 inches, and the mean annual temperature 58°. The county has no railroads.

Hockley, post village in Harris County; population, 296 (1890).

Hodge; village on the Missouri, Kansas and Texas, and the Fort Worth and Denver railroads, in Tarrant County.......... Fort Worth.

Hodges; post village in Jones County.

Hodgson; post village in Bowie County.

Hoesterville; village in Mason County.......................... Mason.

Hog; branch, a right-hand branch of Sandy Creek, tributary to Clear Fork of Brazos River .... Breckenridge.

Hog; creek, a small right-hand branch of Mustang Creek, tributary to Colorado River.................................... Ballinger.

Hog; creek, a right-hand branch of South Bosque River, tributary to Bosque River. {Meridian. Waco.

Hog; creek, a small right-hand intermittent branch of Little Green Creek, tributary to Bosque River.................. Stephenville.

Hog; creek, a right-hand branch of Concho River, tributary to the Colorado River. {Ballinger. Eden.

Hog; creek, a small right-hand branch of Clear Fork of Brazos River.. Anson.

Hog; creek, a left-hand branch of Pecan Bayou, tributary to Colorado River.. Brownwood.

Hog; creek, a left-hand branch of Leon River, tributary to Little River .... Eastland.

Hog; creek, a small left-hand intermittent branch of Colorado River.. Hayrick.

Hog; mountain, a hill in Runnels County .... Hayrick.

Hog; mountain in Bell County .... Georgetown.

Hog; mountain in Brown County.............................. Brownwood.

Hog; mountain in Stephens County........................... Breckenridge.

Hogg; post village in Burleson County.

Holder; post village in Brown County.

Holland; town on the Missouri Pacific Railway, in Bell County; population, 678 .... Taylor.

Holliday; post village in Archer County.

Holliday; triangulation station in Edwards County .... Nueces.

Hollings; branch, a right-hand branch of Mountain Creek, tributary to West Fork of Trinity River .... Fort Worth.

Hollis; post village in Madison County.

Holly; post village in Houston County.

Hollysprings; post village in Newton County.

Holman; post village in Fayette County.

Holmes; post village in Caldwell County.

Home; creek, a large left-hand branch of Colorado River...... {Brady. Coleman.

Homer; post village in Angelina County.

Hondo; county seat of Medina County.

Hondo; creek, a head branch of Frio River.

Hondo; creek, a small left-hand branch of Sandy Creek, tributary to Colorado River..................................... Llano.

	Atlas sheet.
Honea; post village in Montgomery County.	
Honest; post village in Delta County.	
Honey; creek, a right-hand branch of Bosque River, tributary to the Brazos River.	Hamilton. Meridian.
Honey; creek, a small right-hand branch of Hamilton Creek	Burnet.
Honey; creek, a small left-hand branch of Palo Pinto Creek, tributary to Brazos River	Palo Pinto.
Honey; creek, a small left-hand branch of North Fork, tributary to Guadalupe River	Kerrville.
Honey; creek, a left-hand branch of Leon River	Mason.
Honeygrove; city in Fannin County; population, 2,483.	
Hood; post village in Cooke County.	
Hood; a north central county, with an area of 436 square miles. The population was 9,146; the county seat, Granbury. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 40 inches, and the mean annual temperature 65°. The county is traversed by the Fort Worth and Rio Grande, and the Galveston, Houston, and Northern railroads.	Granbury. Stephenville. Weatherford.
Hookerville; post village in Burleson County.	
Hooks; post village in Bowie County.	
Hooks Switch; post village in Hardin County.	
Hoover; knobs, hills in Hamilton County	Hamilton.
Hoover; post village in Lamar County.	
Hoovergin; post village in Hunt County.	
Hoover Valley; village in Peter Creek, in Llano County	Burnet.
Hope; post village in Lavaca County.	
Hopkins; a northeastern county, with an area of 666 square miles. The population was 27,950; the county seat, Sulphur Springs. The mean magnetic declination in 1900 was 8° 10′. The mean annual rainfall is 45 inches, and the mean annual temperature 64°. The county is traversed by the St. Louis and Southwestern, and the Missouri, Kansas and Texas railroads.	
Horde; creek, a right-hand branch of Jim Ned Creek, tributary to Pecan Bayou.	Ballinger. Coleman.
Horne; branch, a small left-hand branch of Aquilla Creek, tributary to Brazos River	Cleburne.
Hornhill; post village in Limestone County.	
Hornsby; post village in Travis County	Austin.
Horse; creek, a small left-hand intermittent branch of Home Creek, tributary to Colorado River	Coleman.
Horse; creek, a small right-hand branch of Colorado River	San Saba.
Horse; hollow, a small left-hand intermittent branch of Sweetwater Creek, tributary to Clear Fork of Brazos River	Roby.
Horse Thief; canyon in Jeff Davis County	Fort Davis.
Hortense; post village in Polk County.	
Horton; post village in Delta County.	
Hot; hot spring in El Paso County	Eagle Mountain.
Hot; post village in Shelby County.	
Hot Spring; creek, a left-hand intermittent branch of Rio Grande River	San Carlos.
Houghton; village on the Missouri, Kansas and Texas Railway, in Hill County	Cleburne.
House; mountain in Llano County; elevation, 1,853 feet	Llano.

Atlas sheet.

Housley; post village in Dallas County .... Dallas.

Houston; a southeastern county, with an area of 1,192 square miles. The population was 25,452; the county seat, Crockett. The mean magnetic declination in 1900 was 6° 50′. The mean annual rainfall is 50 inches, and the mean annual temperature 67°. The county is traversed by the International and Great Northern Railroad.

Houston; city and county seat of Harris County; population, 44,633.

Houston Heights; town in Harris County; population, 800.

Howard; a northwestern county, with an area of 888 square miles. The population was 2,528; the county seat, Bigspring. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 19 inches, and the mean annual temperature 60°. The county is traversed by the Texas and Pacific Railroad.

Howard; creek, a left-hand branch of Pecos River, in Crockett County.

Howard; post village in Ellis County.

Howard; village in Bell County .... Temple.

Howe; town in Grayson County; population, 531.

Howland; post village in Lamar County.

Howth; post village in Waller County.

Hoxie; post village in Williamson County.

Hubbard; city in Hill County; population, 1,608.

Hubbard; creek, a right-hand branch of Clear Fork of Brazos River. Albany. Breckenridge.

Huber; post village in Shelby County.

Huckabay; post village in Erath County.

Hudson; branch; a small left-hand branch of San Saba River, tributary to the Colorado River .... Brady.

Hueco; group of mountains in western Texas.

Hueco; mountains in El Paso County; elevation, 5,392 feet.... El Paso.

Hueco; tanks in El Paso County .... El Paso.

Huelster; post village in Jeff Davis County.

Huelster; village in Reeves County .... Fort Davis.

Huffins; post village in Cass County.

Huffman; post village in Harris County.

Huffsteader; creek, a left-hand branch of Brazos River .... Breckenridge.

Hughes Springs; town of Cass County; population, 296 (1890).

Hugo; post village in Hays County.

Hulen; post village in Galveston County.

Hulltown; village on Texas Central Railroad, in Shackelford County .... Albany.

Humble; post village in Harris County.

Humphrey; post village in Hunt County.

Humphris; village on Sancita Creek, in Presidio County ...... Marfa.

Hungerford; post village in Wharton County.

Hunt; a northeastern county, with an area of 888 square miles. The population was 47,295; the county seat, Greenville. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 42 inches, and the mean annual temperature 65°. The county is traversed by the Texas Midland, the Missouri, Kansas and Texas, and the St. Louis and Southwestern railroads.

Atlas sheet.

Hunt; post village in Hunt County.

Hunter; post village in Comal County.

Hunter; village in Travis County .... Austin.

Hunters Retreat; post village in Montgomery County.

Huntington; post village in Angelina County.

Huntsville; county seat of Walker County; population, 2,485.

Hurnville; post village in Clay County.

Huron; post village in Hill County.

Hurricane; bayou, a left-hand branch of Trinity River, in eastern Texas.

Hurst; creek, a small right-hand intermittent branch of Colorado River .... Austin.

Hurst; gap in Hamilton County .... Lampasas.

Hurst; post village in Coryell County .... Meridian.

Hutcheson; post village in Walker County.

Hutchins; post village on the Houston and Texas Central Railroad, in Dallas County .... Dallas.

Hutchinson; a county situated in the Panhandle, with an area of 850 square miles. The population was 303. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 22 inches, and the mean annual temperature 57°.

Hutchins School House; village in Runnels County .... Hayrick.

Hutto; post village on the International and Great Northern Railroad, in Williamson County .... Georgetown.

Hyatt; post village in Tyler County; population, 429 (1890).

Hydesport; village in Mills County .... Brownwood.

Hye; post village in Blanco County.

Hylton; post village in Nolan County.

Iago; post village in Wharton County.

Iatan; post village in Mitchell County.

Ida; post village in Grayson County.

Idlewood; post village in Bexar County.

Ike; post village in Ellis County.

Illinois Bend; post village in Montague County.

Immermere; post village in Erath County.

Imperialist; creek, a left-hand branch of Rio Grande River... Brackett.

Independence; creek, a right-hand branch of Pecos River, in Pecos County.

Independence; post village in Washington County; population, 373 (1890).

India; post village in Ellis County.

Indian; creek, a left-hand branch of East Nueces River, tributary to Nueces River .... Uvalde.

Indian; creek, a small left-hand branch of Scott Branch, tributary to Pedernales River .... Kerrville.

Indian; creek, a left-hand intermittent branch of West Nueces River, tributary to the Nueces .... Nueces.

Indian; creek, a small right-hand branch of Jim Ned Creek, tributary to Pecan Bayou .... Coleman.

Indian; creek, a right-hand tributary to Clear Fork of Brazos River .... Albany.

Indian; creek, a left-hand branch of West Fork of Trinity River .... Fort Worth.

	Atlas sheet.
Indian; creek, a right-hand branch of Leon River, tributary to Little River.	Brownwood. Hamilton.
Indian; creek, a small left-hand branch of Colorado River	Brownwood. San Saba.
Indian; creek, a small left-hand branch of Bosque River	Stephenville.
Indian; hollow, a small right-hand branch of Walnut Creek, tributary to Colorado River	Burnet.
Indian; knob, a hill in Parker County	Weatherford.
Indian; mountain in Brown County	Coleman.
Indian; mountain in Comanche County	Eastland.
Indian; mountains in Edwards County; elevation, 2,114 feet	Nueces.
Indianapolis; village in Mason County	Mason.
Indian Camp; creek, a small left-hand branch of Richardsons Creek, tributary to Brazos River	Stephenville.
Indian Creek; post village in Brown County	Brownwood.
Indian Gap; post village in Hamilton County	Hamilton.
Indio; village in Presidio County	Ruidosa.
Industry; post village in Austin County.	
Inez; post village in Victoria County.	
Inge; mountain in Uvalde County	Uvalde.
Ingleside; post village in San Patricio County.	
Ingram; post village in Kerr County.	
Iola; post village in Grimes County.	
Iolanthe; post village in Sterling County.	
Ioni; creek, a right-hand branch of Brazos River	Breckenridge.
Ioni; creek, a small right-hand branch of Brazos River	Palo Pinto.
Iowa Park; village in Wichita County; population, 424 (1890).	
Ira; post village in Scurry County.	
Iredell· post village on Bosque River, and on the Texas Central Railroad, in Bosque County; population, 251 (1890)	Meridian.
Irene; post village in Hill County.	
Irion; a southwestern county, with an area of 800 square miles. The population was 848; the county seat, Sherwood. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 20 inches, and the mean annual temperature 63°	Sherwood.
Iris; post village in Trinity County.	
Iron; creek, a small left-hand intermittent branch of Brazos River	Waco.
Iron Mountain; post village in Rusk County.	
Ironosa; post village in San Augustine County.	
Iron Rock; creek, a small left-hand branch of Pedernales River	Fredericksburg.
Ironwood; post village in Liberty County.	
Irwin; creek, a small left-hand branch of Clear Fork of Brazos River	Albany.
Irwin; post village in Rusk County.	
Isabel; post village in Cameron County.	
Isaca, post village in Red River County.	
Isla; post village in Sabine County.	
Island; creek, a right-hand branch of South Fork of Chambers Creek, tributary to Trinity River	Cleburne.
Island; post village in Limestone County.	

	Atlas sheet.
Israel; post village in Freestone County.	
Italy; town in Ellis County; population, 1,061.	
Itasca; post village on the Missouri, Kansas and Texas Railway, in Hill County	Cleburne.
Iuka; post village in Atascosa County.	
Ivanhoe; post village in Fannin County.	
Iverson; post village in Hill County.	
Izoro; post village in Lampasas County.	
Jack; a north central county, with an area of 858 square miles. The population was 10,224; the county seat, Jacksboro. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 33 inches, and the mean annual temperature 64°.	
Jacks; branch, a right-hand tributary of Clear Fork of Brazos River	Albany.
Jacks; branch, a right-hand branch of Hackberry Creek, tributary to Brazos River.	Cleburne. Waco.
Jacksboro; county seat of Jack County; population, 1,311.	
Jackson; a southern county, with an area of 888 square miles. The population was 6,094; the county seat, Edna. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 42 inches, and the mean annual temperature 70°. The county is traversed by the Southern Pacific, and the Gulf, Western Texas and Pacific railroads.	
Jackson; branch, a small right-hand branch of Clear Fork of Brazos River	Albany.
Jackson; lake, in Falls County	Temple.
Jackson; post village in Van Zandt County.	
Jacksonville; city in Cherokee County; population, 1,568.	
Jacobia; post village in Hunt County.	
Jacobs; branch, a small left-hand branch of Brazos River	Weatherford.
Jacobs Wells; village on Elm Branch in Palo Pinto County	Palo Pinto.
James; river, a right-hand branch of Leon River	Mason.
James; river, a right-hand branch of Llano River heading in East and West Forks.	Kerrville. Mason.
Jameson; peaks in Eastland County	Stephenville.
Jameson; post village in Grayson County.	
Jamestown; post village in Smith County.	
Japaney; creek, a left-hand branch of Frio River.	
Japonica; post village on Guadalupe River in Kerr County	Kerrville.
Jardin; post village in Hunt County.	
Jarvis; post village in Liberty County.	
Jasmine; post village in Victoria County.	
Jasper; a southeastern county, with an area of 977 square miles. The population was 7,138; the county seat, Jasper. The mean magnetic declination in 1900 was 7° 10′. The mean annual rainfall is 55 inches, and the mean annual temperature 69°. The county is traversed by the Gulf, Beaumont and Kansas City Railroad.	
Jasper; county seat of Jasper County.	
Java; post village in Cherokee County.	
Jaynes; post village in McLennan County.	
Jeannette; post village in Jack County.	

Atlas sheet.

Jeddo; post village in Bastrop County; population, 559 (1890).

Jeff Davis; a western county, with an area of 1,922 square miles. The population was 1,150; the county seat, Fort Davis. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 14 inches, and the mean annual temperature 60°. The county is traversed by the Southern Pacific Railroad.

Jefferson; a southeastern county, with an area of 1,109 square miles. The population was 14,239; the county seat, Beaumont. The mean magnetic declination in 1900 was 7° 15′. The mean annual rainfall is 55 inches, and the mean annual temperature 70°. The county is traversed by the Southern Pacific, the Gulf, Beaumont and Kansas City, the Gulf and Interstate of Texas, the Port Arthur Route, and the Texas and New Orleans railroads.

Jefferson; the county seat of Marion County; population, 2,850.

Jellico; post village in Tarrant County.

Jennings; post village in Lamar County.

Jessie; post village in Hill County.

Jester; post village in Navarro County.

Jetie; post village in Bowie County.

Jewell; post village in Eastland County...................... Eastland.

Jewett; post village in Leon County; population, 363 (1890).

Jim; bay, a right-hand branch of Red River in northeast Texas.

Jimmy; creek, tributary to Little River .... Brownwood.

Jim Nail; branch, a left-hand branch of Leon River, tributary to Little River .... Eastland.

Jim Ned; creek, a large right-hand branch of Pecan Bayou.... {Abilene. Coleman.

Jim Town; village in Dallas County .... Dallas.

Jines; post village in Ochiltree County.

Joaquin; post village in Shelby County.

Jobs; creek, a small left-hand branch of San Saba River, tributary to the Colorado River .... San Saba.

John; post village in Travis County.

Johnson; a north central county, with an area of 740 square miles. The population was 33,819; the county seat, Cleburne. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 40 inches, and the mean annual temperature 65°. The county is traversed by the Gulf, Colorado and Santa Fe, and the Missouri, Kansas and Texas railroads.

Johnson; county seat of Blanco County...................... Blanco.

Johnson; creek, a left-hand branch of Guadalupe River....... Kerrville.

Johnson; creek, a small right-hand branch of West Fork of Trinity River .... Fort Worth.

Johnson; peak in Bosque County............................ Meridian.

Johnson Station; post village in Tarrant County............. Fort Worth.

Jolly; post village in Clay County.

Jollyville; plateau in Travis County.

Jollyville; village in Williamson County...................... Austin.

Jonah; post village in Williamson County.

Atlas sheet.

Jones; a north central county, with an area of 900 square miles. The population was 7,053; the county seat, Anson. The mean magnetic declination in 1900 was 9° 45′. The mean annual rainfall is 25 inches, and the mean annual temperature 64°. Anson. Roby.

Jones; creek, a small tributary of Red River in the Staked Plains.

Jonesboro; post village in Coryell County; population, 207 (1890) Meridian.

Jones Prairie; post village in Milam County.

Jonesville; post village in Harrison County.

Joplin; post village in Jack County.

Joppa; post village in Burnet County.

Josephine; post village in Collin County.

Joshua; post village in Johnson County, on the Gulf, Colorado and Santa Fe Railway .... Cleburne.

Josserand; post village in Trinity County; population, 461 (1890).

Joy; post village in Clay County.

Juan; canyon in Anacacho Mountains, in Kinney County ..... Brackett.

Judson; post village in Gregg County.

Jug; creek, a left-hand branch of Middle Concho River, tributary to Concho River .... Sherwood.

Julian; post village in Houston County.

Juliff; post village in Fort Bend County.

Jumbo; post village in Panola County.

Junction; county seat of Kimble County; population, 449 (1890).

Juno; post village in Valverde County.

Justice; a spring in Edwards County .... Nueces.

Justin; post village in Denton County.

Ka; post village in Dallas County .... Dallas.

Kaleta; post village in San Patricio County.

Kanawha; post village in Red River County.

Kaolin; creek, a small right-hand branch of Frio River, tributary to Nueces River .... Uvalde.

Karnack; post village in Harrison County.

Karnes; a southern county, with an area of 740 square miles. The population was 8,681; the county seat, Karnes. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 35 inches, and the mean annual temperature 70°. The county is traversed by the San Antonio and Aransas Pass Railway.

Karnes; county seat of Karnes County.

Kasoga; post village in Knox County.

Katemcy; creek, a right-hand branch of San Saba River ...... Mason.

Katemcy; post village in Mason County.

Kathleen; post village in Brown County.

Katy; post village in Harris County.

Kaufman; a northeastern county, with an area of 932 square miles. The population was 33,376; the county seat, Kaufman. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 45 inches, and the mean annual temperature 65°. The county is traversed by the Texas Midland, the Texas Trunk, the Houston and Texas Central, and the Texas and Pacific railroads .... Dallas.

	Atlas sheet.
Kaufman; county seat of Kaufman County; population, 2,378.	
Kee; branch, a right-hand tributary of West Fork of Trinity River	Fort Worth.
Keechi; creek, a left-hand branch of Brazos River	Palo Pinto.
Keechi; post village in Jack County.	
Keene; post village in Johnson County.	
Keeter; post village in Wise County.	
Keith; post village in Grimes County.	
Keller; post village on the Missouri, Kansas and Texas Railway, in Tarrant County	Fort Worth
Kelley; creek, a right-hand branch of Guadalupe River	Kerrville.
Kelley; peak in Edwards County	Nueces.
Kellogg; post village in Hunt County.	
Kellyville; village in Marion County; population, 279 (1890).	
Kelm; post village in Navarro County.	
Keltys; post village in Angelina County.	
Kemp; town in Kaufman County; population, 335 (1890).	
Kemper; post village in Victoria County.	
Kempner: post village in Lampasas County.	
Kendalia; post village in Kendall County.	
Kendall; a central county, with an area of 613 square miles. The population was 4,103; the county seat, Boerne. The mean magnetic declination in 1900 was 8° 45′. The mean annual rainfall is 30 inches, and the mean annual temperature 67°. The county is traversed by the San Antonio and Aransas Pass Railroad	Fredericksburg.
Kendleton; post village in Fort Bend County.	
Kenedy; post village in Karnes County.	
Kennedale; post village on the Houston and Texas Central Railroad, in Tarrant County	Fort Worth.
Kenney; post village in Austin County.	
Keno; post village in Liberty County.	
Kent; a northwestern county, with an area of 777 square miles. The population was 899; the county seat, Clairemont. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 20 inches, and the mean annual temperature 62°.	
Kent; post village in El Paso County.	
Kenton; post village in Bastrop County.	
Kentuckytown; post village in Grayson County.	
Kerby; post village in Hill County.	
Kerens; post village in Navarro County; population, 735.	
Kerr; a central county, with an area of 1,210 square miles. The population was 4,980; the county seat, Kerrville. The mean magnetic declination in 1900 was 8° 50′. The mean annual rainfall is 28 inches, and the mean annual temperature 65°. The county is traversed by the San Antonio and Aransas Pass Railway.	Fredericksburg. Kerrville.
Kerr; creek, a right-hand branch of Third Yegua Creek	Bastrop.
Kerrville; county seat of Kerr County; population, 1,423.	
Key; post village in Grayson County.	
Kicaster; post village in Wilson County.	
Kickapoo; a left-hand branch of Trinity River in eastern Texas.	

	Atlas sheet.
Kickapoo; a spring in the valley of Kickapoo Creek, in Tom Green County	San Angelo.
Kickapoo; creek, a large right-hand branch of Concho River	San Angelo. Eden. Ballinger.
Kickapoo; creek, a small right-hand branch of Brazos River	Stephenville. Palo Pinto.
Kickapoo; creek, a small left-hand intermittent branch of West Nueces River	Nueces.
Kickapoo; creek, a right-hand branch of Brazos River	Palo Pinto. Weatherford.
Kickapoo; creek, a right-hand branch of Neches River in eastern Texas.	
Kickapoo; creek, divides into east and west left-hand branches of Colorado River	Hayrick.
Kickapoo; post village in Anderson County.	
Kildare; post village in Cass County; population, 366 (1890).	
Kildoogan; creek, a small left-hand intermittent branch of Sweetwater Creek, tributary to Clear Fork of Brazos River	Roby.
Kilgore; post village in Gregg County; population, 248 (1890).	
Killeen; post village in Bell County; population, 780.	
Kimball; post village in Bosque County	Granbury.
Kimball; village on Brazos River, in Hill County	Cleburne.
Kimble; a central county, with an area of 1,302 square miles. The population was 2,503; the county seat, Junction. The mean magnetic declination in 1900 was 9°. The mean annual rainfall is 25 inches, and the mean annual temperature 65°.	Mason. Fort McKavett. Rock Springs. Kerrville.
Kinchelo; peak in Lampasas County; elevation, 1,433 feet	Lampasas.
King; a northwestern county, with an area of 928 square miles. The population was 490; the county seat, Guthrie. The mean magnetic declination in 1900 was 9° 45′. The mean annual rainfall is 24 inches, and the mean annual temperature 62°.	
King; creek, a left-hand branch of Colorado River	San Saba.
King; mountains in Llano County	Llano.
King; post village in Coryell County.	
Kings; creek, a left-hand branch of Brazos River	Albany. Breckenridge.
Kings; creek, a left-hand branch of Clear Fork of Brazos River, tributary to Brazos River.	Albany. Breckenridge.
Kingsbury; post village in Guadalupe County.	
Kings Farm; post village in Cass County.	
Kingsland; post village in Llano County.	
Kingston; post village in Hunt County; population, 338 (1890).	
Kingwillow; post village in Navarro County.	
Kinkler; post village in Lavaca County.	
Kinney; a southwestern county; with an area of 1,269 square miles. The population was 2,447; the county seat, Brackettville. The mean magnetic declination in 1900 was 8° 40′. The mean annual rainfall is 20 inches, and the mean annual temperature 68°. The county is traversed by the Southern Pacific Railroad	Nueces.

Atlas sheet.

Kiomache; post village in Red River County.

Kipling; post village in Kaufman County.

Kirbyville; post village in Jasper County.

Kirk; post village in Limestone County.

Kirkendell; hollow, a small left-hand branch of Resley Creek, tributary to Leon River .... Stephenville.

Kirkland; post village in Childress County.

Kit; post village in Dallas County.

Kittrell; post village in Walker County.

Kleburg; post village on Texas Trunk Railroad, in Dallas County .... Dallas.

Klein; branch, a small right-hand branch of Pedernales River .... Kerrville.

Klein; post village in Harris County.

Klondike; post village in Delta County.

Klump; post village in Washington County.

Knapp; post village in Scurry County.

Knickerbocker; post village in Tom Green County .... Sherwood.

Knight; post village in Polk County.

Knights; branch, a small left-hand branch of Trinity River .... Dallas.

Knippa; post village in Uvalde County.

Knob; post village in Parker County.

Knox; a north central county, with an area of 947 square miles. The population was 2,322; the county seat, Benjamin. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 25 inches, and the mean annual temperature 62°.

Knox; branch, a small left-hand branch of Clear Fork, of Brazos River .... Albany.

Knox; post village in Collin County.

Koerth; post village in Lavaca County.

Kokomo; post village in Eastland County.

Kolls; post village in Bell County.

Koockville; village in Mason County .... Mason.

Kopperl; post village on the Gulf, Colorado and Santa Fe Railway, in Bosque County .... Granbury.

Korville; post village in Harris County.

Kosciusko; post village in Wilson County.

Kosse; town in Limestone County; population, 717.

Kouns; village in Travis County .... Austin.

Kountze; county seat of Hardin County; population, 295 (1890).

Krajina; post village in Lavaca County.

Kriegel; post village in Wharton County.

Krum; post village in Denton County.

Kurten; post village in Brazos County.

Kyle; mountain in Palo Pinto County .... Palo Pinto.

Kyle; post village in Hays County; population, 779 (1890).

Labelle; post village in Jefferson County.

Lacasa; post village in Stephens County.

Laceola; post village in Madison County.

Lacoste; post village in Medina County.

Lacy; post village in Young County.

Lacy; village in Burnet County .... Burnet.

Ladonia; town in Fannin County; population, 1,409.

	Atlas sheet.
Lafayette; post village in Upshur County.	
Lagardo; creek, a right-hand tributary to Nueces River, in southwestern Texas.	
Lagarto; town in Live Oak County; population, 266 (1890).	
Lagrange; county seat of Fayette County; population, 2,392.	
Laguna Madre; a long, narrow, salt-water lake separated from the Gulf of Mexico by Padre Island.	
Laguna; post village in Uvalde County	Brackett.
Lake; creek, a small branch of San Jacinto River, in southeastern Texas.	
Lake; creek, a left-hand branch of Palo Pinto Creek, tributary to Brazos River	Palo Pinto.
Lake; creek, a head branch of Brushy Creek, tributary to San Gabriel River.	Austin. Georgetown.
Lake; creek, a tributary of San Jacinto.	
Lake; fork, a left-hand branch of Sabine River, in northeastern Texas.	
Lake; hollow, a valley in Schleicher County	Fort McKavett.
Lake; post village in Robertson County.	
Lake; village in Milam County	Taylor.
Lake Charlotte; post village in Chambers County.	
Lakecreek; post village in Delta County.	
Lake McDonald; lake in Colorado River	Austin.
Lakenon; post village in Hill County.	
Lakeside; post village in Colorado County.	
Lakeview; post village in Hall County.	
Lakewood; post village on Colorado River, in Travis County	Austin.
Lakota; post village in Parker County.	
Lallah; branch, a small right-hand intermittent branch of Brazos River	Granbury.
Lamar; a northeastern county, with an area of 903 square miles. The population was 48,627; the county seat, Paris. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 45 inches, and the mean annual temperature 64°. The county is traversed by the Texas and Pacific, and the St. Louis and Southwestern railroads.	
Lamar; post village in Aransas County.	
Lamarque; post village in Galveston County.	
Lamasco; post village in Fannin County.	
Lamb; a northwestern county, with an area of 1,021 square miles. The population was 31. The mean magnetic declination in 1900 was 11° 15′. The mean annual rainfall is 17 inches, and the mean annual temperature 58°.	
Lambert; post village on the Texas and Pacific Railway, in Parker County	Weatherford.
Lambs Head; creek, a right-hand branch of Clear Fork of Brazos River	Albany.
Lamkin; post village on Leon River, in Comanche County	Hamilton.
Lampasas; a central county, with an area of 755 square miles. The population was 8,625; the county seat, Lampasas. The mean magnetic declination in 1900 was 9°. The mean annual rainfall is 32 inches, and the mean annual temperature 66°. The county is traversed by the Gulf, Colorado and Santa Fe Railway.	Lampasas. San Saba.

	Atlas sheet.
Lampasas; county seat of Lampasas County; population, 2,107.	
Lampasas; river, a right-hand branch of Little River	Gatesville. Georgetown. Hamilton. Lampasas. Taylor. Temple.
Lanana; post village in Nacogdoches County.	
Lancaster; town on the Missouri, Kansas and Texas Railway, in Dallas County; population, 1,045	Dallas.
Lancing; post village in Hamilton County.	
Landrum; post village in Cherokee County.	
Lane; post village in Hunt County.	
Lanely; post village in Freestone County.	
Laneport; post village in Williamson County.	
Laneville; post village in Rusk County.	
Lang; creek, a small right-hand branch of Llano River, tributary to the Colorado River	Llano.
Lange; post village in Gillespie County.	
Langford; gap in Coryell County	Lampasas.
Langtry; post village in Valverde County.	
Lanham; post village in Hamilton County	Meridian.
Lanier; post village in Cass County.	
Lannius; post village in Fannin County.	
Lapara; post village in Live Oak County.	
La Parita; branch of Atascosa River, in southern Texas.	
Laporte; post village in Harris County; population, 537.	
Laredo; county seat of Webb County; population, 13,429.	
Larissa; post village in Cherokee County.	
Larrison; creek, a right-hand tributary of Trinity River.	
Lasalle; a southern county, with an area of 1,707 square miles. The population was 2,203; the county seat, Cotulla. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 28 inches, and the mean annual temperature 70°. The county is traversed by the International and Great Northern Railroad.	
Lasalle; post village in Limestone County.	
Lasater; post village in Marion County.	
Las Lenguas; creek, a left-hand branch of Rio Grande, in Brewster County.	
Las Moras; creek, a left-hand branch of the Rio Grande River	Brackett.
Las Moras; spring in Las Moras Creek, in Kinney County	Brackett.
Las Moras Mountain; triangulation station in Kinney County; elevation, 1,667 feet	Brackett.
Latch; post village in Upshur County.	
Latham; creek, a small right-hand branch of Wallace Creek, tributary to San Saba River	San Saba.
Latium; post village in Washington County.	
Laurel; post village in Newton County.	
Lavaca; a southeastern county, with an area of 992 square miles. The population was 28,121; the county seat, Hallettsville. The mean magnetic declination in 1900 was 8° 25′. The mean annual rainfall is 40 inches, and the mean annual temperature 68°. The county is traversed by the San Antonio and Aransas Pass Railway.	

Atlas sheet.

Lavaca; arm of Matagorda Bay, extending inland.

Lavaca; river, flows into Matagorda Bay.

Lavender; post village in Limestone County.

Lavernia; post village in Wilson County.

Lavon; post village in Collin County.

Lawn; post village in Taylor County.

Lawrence; post village in Kaufman County.

Laws; post village in Franklin County.

Lawson; post village in Dallas County.

Lawsonville; post village in Rusk County.

Leagueville; post village in Henderson County.

Leakey; post village in Edwards County.

Leander; post village on the Austin and Northwestern Railroad, in Williamson County .... Georgetown.

Leary; post village in Bowie County.

Lebanon; post village in Collin County.

Ledbetter; post village in Fayette County.

Ledford; post village in Caldwell County.

Lee; a southeastern county, with an area of 666 square miles. The population was 14,595; the county seat, Giddings. The mean magnetic declination in 1900 was 8° 20′. The mean annual rainfall 42 inches, and the mean annual temperature 68°. The county is traversed by the San Antonio and Aransas Pass, and the Houston and Texas Central railroads. Taylor. Bastrop.

Lee; a gap along the Gulf, Colorado and Santa Fe Railway, in Lampasas County .... Lampasas.

Leesburg; post village in Camp County.

Lees Mill; post village in Newton County.

Leesville; post village in Gonzales County.

Lefors; post village in Gray County.

Leggett; post village in Polk County.

Legion; creek, a small right-hand intermittent branch of Sandy Creek, tributary to Colorado River .... Llano.

Lehman; post village in Bastrop County.

Leland; post village in Ellis County.

Lenoir; village in Jones County .... Anson.

Lenoria; village in El Paso County .... El Paso.

Leo; post village in Cooke County.

Leon; a southeastern county, with an area of 1,066 square miles. The population was 18,072; the county seat, Centerville. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 48 inches, and the mean annual temperature 67°. The county is traversed by the International and Great Northern Railroad.

Leon; creek, a right-hand tributary of San Antonio River.

Leon; river, a right-hand tributary to Brazos River, in central Texas. It heads in three forks—North, Middle, and South—in Eastland County. Eastland. Stephenville. Brownwood. Hamilton. Gatesville. Temple. Taylor.

Leona: post village in Leon County.

Atlas sheet.

Leona; river, a left-hand branch of Frio River.

Leona; river, a left-hand tributary to Nueces River .... Uvalde.

Leonard; post village in Fannin County; population, 750.

Leon Junction; post village in Coryell County.

Leon Springs; post village in Bexar County.

Leroy; post village in McLennan County.

Lester; post village in Hunt County.

Letot; post village in Dallas County .... Dallas.

Levi; post village in McLennan County.

Levita; post village in Coryell County.

Lewis; hill in Uvalde County .... Uvalde.

Lewis; canyon in Taylor County .... Abilene.

Lewis Ferry; post village in Jasper County.

Lewisville; village in Denton County; population, 498 (1890).

Lexington; post village in Lee County .... Bastrop.

Libby; post village in Nacogdoches County.

Liberty; a southeastern county, with an area of 1,162 square miles. The population was 8,102; the county seat, Liberty. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 50 inches, and the mean annual temperature 68°. The county is traversed by the Texas and New Orleans, the Southern Pacific, and the Gulf, Colorado and Santa Fe railroads.

Liberty; county seat of Liberty County; population, 865.

Liberty Hill; post village on the Austin and Northwestern Railroad, in Williamson County; population, 309 (1890) .... Georgetown.

Lick; branch, a small left-hand branch of Leon River, tributary to Little River .... Eastland.

Light; post village in Scurry County.

Lihe; creek, a small left-hand branch of Brazos River .... Palo Pinto.

Lilac; post village in Milam County .... Palo Pinto.

Lilbert; post village in Nacogdoches County.

Lima; post village in Bandera County.

Limestone; a southeastern county, with an area of 987 square miles. The population was 32,573; the county seat, Groesbeck. The mean magnetic declination in 1900 was 8° 40′. The mean annual rainfall is 44 inches, and the mean annual temperature 67°. The county is traversed by the Houston and Texas Central Railroad.

Limpia; canyon in Jeff Davis County .... Fort Davis.

Lincoln; post village in Lee County.

Lindale; post village in Smith County.

Linden; county seat of Cass County; population, 444 (1890).

Lindenau; post village in Dewitt County.

Lindsay; post village in Cooke County.

Lingleville; post village in Erath County .... Stephenville.

Linnflat; post village in Nacogdoches County.

Linwood; post village in Cherokee County.

Lipan; creek, a large right-hand branch of Concho River ...... Hayrick. San Angelo.

Lipan; post village in Hood County.

Lipan; spring in the valley of Lipan Creek, in Tom Green County .... San Angelo.

	Atlas sheet.
Lipan; village in Erath County	Palo Pinto.
Lipscomb; a county situated in the Panhandle, with an area of 850 square miles. The population was 790; the county seat, Lipscomb. The mean magnetic declination in 1900 was 10° 40′. The mean annual rainfall is 22 inches, and the mean annual temperature 54°. The county is traversed by the Southern Kansas Railway of Texas.	
Lipscomb; county seat of Lipscomb County.	
Lisbon; post village in Dallas County	Dallas.
Lissie; post village in Wharton County.	
Littig; post village in Travis County.	
Little; creek, a left-hand branch of Red Oak Creek, tributary to Trinity River	Dallas.
Little; river, a right-hand branch of Brazos River, in central Texas.	
Little Aguja; mountain in Jeff Davis County	Fort Davis.
Little Alum; creek, a small right-hand intermittent branch of Alum Creek, tributary to Colorado River	Austin.
Little Aquilla; creek, a right-hand branch of Aquilla Creek, tributary to Brazos River.	Cleburne. Waco.
Little Barton; creek, a left-hand branch of Barton Creek, tributary to Colorado River	Austin.
Little Bear; creek, a left-hand branch of Bear Creek, tributary to Little River	Hamilton.
Little Bear; creek, a right-hand branch of Big Bear Creek, tributary to West Fork of Trinity River	Fort Worth.
Little Blanco; river, a left-hand intermittent branch of Blanco River, tributary to Nueces River	Uvalde.
Little Blanco; river, a right-hand branch of Blanco River	Blanco.
Little Bosque; creek, a branch of South Bosque River, tributary to North Bosque River	Temple.
Little Brady; creek, a left-hand branch of Brady Creek, tributary to San Saba River	Brady.
Little Brazos; river, a left-hand branch of Brazos River.	
Little Caddo; creek, a right-hand branch of Big Caddo Creek, tributary to Brazos River	Breckenridge.
Little Camp; creek, a small left-hand branch of Brazos River	Granbury.
Little Cow; creek, a right-hand branch of the Sabine River, in eastern Texas.	
Little Cypress; creek, a right-hand branch of Red River, in northeastern Texas.	
Little Cypress; creek, a right-hand branch of Colorado River	Blanco.
Little Deer; creek, a small right-hand branch of Deer Creek, tributary to Brazos River	Temple.
Little Duffau; creek, a right-hand branch of Duffau Creek, tributary to Bosque River.	Stephenville. Granbury.
Little Elm; creek, a left-hand branch of Elm Creek, tributary to Clear Fork of Brazos River	Abilene.
Little Elm; creek, a right-hand branch of Big Elm Creek, tributary to Little River.	Temple. Taylor.
Little Elm; fork, a branch of Clear Fork of Trinity River, in northern Texas.	
Little Elm; post village in Denton County.	

	Atlas sheet.
Little Fossil; creek, a small left-hand branch of West Fork of Trinity River	Fort Worth.
Little Green; creek, a right-hand branch of Green Creek, tributary to Bosque River	Stephenville.
Little Indian; creek, a left-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Albany.
Little Jimmys; creek, a right-hand branch of Copperas Creek, tributary to Little River.	Brownwood. Eastland.
Little Keechi; creek, a left-hand branch of Brazos River	Palo Pinto.
Little Llano; creek, a left-hand branch of Llano River, tributary to Colorado River	Llano.
Little Lucy; creek, a right-hand branch of Big Lucy Creek, tributary to Little River	Lampasas.
Little Mary's; creek, a small right-hand branch of Marys Creek, tributary to Clear Fork of Trinity River	Weatherford.
Little Mountain; creek, a tributary to Little River	Brownwood. Hamilton.
Little Muela; creek, a small left-hand intermittent branch of Muela Creek, tributary to Nueces River	Brackett.
Little Pine Island; bayou, a tributary to Neches River.	
Little River; post village in Bell County.	
Little Rocky; creek, a small right-hand branch of Brazos River	Waco.
Little Sandy; creek, a right-hand branch of Sandy Creek, tributary to Clear Fork of Brazos River.	Eastland. Breckenridge.
Little Silver; creek, a small right-hand branch of Silver Creek, tributary to West Fork of Trinity River	Weatherford.
Little Sunday; creek, a left-hand branch of Big Sunday Creek, tributary to Brazos River.	Stephenville. Palo Pinto.
Little Twin Sister; peaks in Hess County	Blanco.
Little Walnut; creek, a right-hand branch of Walnut Creek, tributary to Colorado River	Austin.
Little Wichita; river, a right-hand branch of Red River, in northern Texas.	
Little Willow; creek, a left-hand tributary to Leon River	Mason.
Live Oak; a southern county, with an area of 1,123 square miles. The population was 2,268; the county seat, Oakville. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 32 inches, and the mean annual temperature 70°. The county has no railroads.	
Live Oak; creek, a small left-hand branch of Pond Creek, tributary to Brazos River	Temple.
Live Oak; creek, a small left-hand intermittent branch of Middle Concho River, tributary to Concho River	Sherwood.
Liveoak; creek, a right-hand branch of Colorado River	Hayrick.
Live Oak; creek, a right-hand intermittent branch of Big Sandy Creek, tributary to Clear Fork of Brazos River	Breckenridge.
Live Oak; creek, a small right-hand branch of Brady Creek, tributary to San Saba River	Eden.
Live Oak; creek, a small left-hand intermittent branch of Brady Creek, tributary to San Saba River	Brady.
Live Oak; creek, a small right-hand branch of South Leon Creek, tributary to Little River	Hamilton.

	Atlas sheet.
Live Oak; creek, a left-hand branch of Pedernales River	Kerrville. Fredericksburg.
Live Oak; creek, a small right-hand branch of Bosque River	Stephenville.
Live Oak; creek, a small right-hand intermittent branch of Hog Creek, tributary to Bosque River	Meridian.
Liveoak; creek, a left-hand intermittent branch of West Nueces River, tributary to the Nueces.	Nueces. Brackett.
Liveoak; creek, a left-hand intermittent tributary to Nueces River	Uvalde.
Live Oak; draw, a shallow valley in Sutton County	Rock Springs.
Live Oak; hollow, a valley in Schleicher County	Fort McKavett.
Liverpool; post village in Brazoria County.	
Livingston; post village in Polk County.	
Llano; county seat of Llano County	Llano.
Llano; a central county, with an area of 977 square miles. The population was 7,301; the county seat, Llano. The mean magnetic declination in 1900 was 9°. The mean annual rainfall is 30 inches, and the mean annual temperature 66°. The county is traversed by the Austin and Northwestern Railroad.	Llano. Burnet.
Llano; river, a large right-hand branch of Colorado River, heading in Sutton County and flowing a little north of east to its mouth; length, 140 miles.	Llano. Mason. Burnet.
Lloyd; post village in Denton County.	
Loafer; creek, a right-hand branch of San Saba River	Mason.
Loafer; creek, a right-hand branch of Tiger Creek, tributary to San Saba River.	Mason. Brady.
Lockett; post village in Marion County.	
Lockhart; county seat of Caldwell County; population, 2,306.	
Lockhart; mountain in Llano County; elevation, 1,438 feet	Llano.
Lockney; post village in Floyd County.	
Loco; post village in Childress County.	
Locust; post village in Grayson County.	
Lodi; post village in Marion County.	
Lodwick; post village in Marion County.	
Loebau; post village in Lee County.	
Logan; gap in Comanche County	Brownwood.
Logan; post village in Panola County.	
Lohn; post village in McCulloch County.	
Loire; post village in Atascosa County.	
Lois; post village in Cooke County.	
Lometa; post village in Lampasas County.	
London; post village in Kimble County.	
Lone; mountain in Erath County	Granbury.
Lone; mountain in Hamilton County	Meridian.
Lonegrove; post village on Little Llano Creek, in Llano County	Llano.
Lone Man; mountain in Hess County	Blanco.
Loneoak; post village in Hunt County; population, 496.	
Lonestar; post village in Cherokee County.	
Lone Tree; hill in Zavalla County	Uvalde.
Lone Tree; triangulation station in Travis County	Austin.
Lone Woman; mountain in Hess County	Blanco.

	Atlas sheet.
Long; branch, a left-hand branch of Sabana River, tributary to Little River	Eastland.
Long; branch, a small right-hand intermittent branch of Bufford Creek, tributary to Clear Fork of Brazos River	Breckenridge.
Long; branch, a small right-hand branch of Bosque River	Waco.
Long; branch, a small left-hand, intermittent branch of Colorado River	Ballinger.
Long; branch, a small tributary to Red River in the Staked Plains.	
Long; creek, a right-hand branch of Deadman Creek, tributary to Clear Fork of Brazos River	Anson.
Long; creek, a left-hand branch of Brazos River	Weatherford.
Long; draw, a shallow valley in Presidio County	Marfa.
Long; hollow, a valley in Uvalde County	Uvalde.
Long; mountain in Llano County	Burnet.
Long; right-hand tributary to Clear Fork of Brazos River	Albany.
Longbranch; post village in Panola County.	
Longfellow; post village in Pecos County.	
Long John; hollow in Uvalde County	Brackett.
Long King; creek, a left-hand branch of Trinity River in eastern Texas.	
Longmott; post village in Calhoun County.	
Longpoint; post village in Washington County.	
Longstreet; post village in Montgomery County.	
Longview; county seat of Gregg County; population, 3,591.	
Lookout; mountain in San Saba County	Brady.
Lookout; post village in Bexar County.	
Looneyville; post village in Nacogdoches County.	
Lopez; creek, a small right-hand tributary to Comanche River	Sherwood.
Loraine; post village in Mitchell County.	
Lorena; post village on the Missouri, Kansas and Texas Railway, in McLennan County	Temple.
Los Olmos; creek, a right-hand tributary to Nueces River in southwestern Texas.	
Losoya; post village in Bexar County.	
Loss; village in Kinney County	Nueces.
Lost; creek, a small right-hand tributary to San Saba River.	
Lost; creek, a left-hand branch of Big Sunday Creek, tributary to Brazos River.	Stephenville. Palo Pinto.
Lost; creek, a small left-hand intermittent branch of Home Creek, tributary to Colorado River	Coleman.
Lost; gap in Brown and Comanche counties	Eastland.
Lost; hollow, a small left-hand intermittent branch of Sandy Creek, tributary to Colorado River	Llano.
Lostprong; post village in Wharton County.	
Lott; post village on the Aransas Pass Railway, in Falls County; population, 614	Temple.
Louise; post village in Wharton County.	
Love; creek, a small right-hand branch of Colorado River	Blanco. Burnet.
Lovelace; post village in Hill County.	
Lovelady; post village in Houston County.	
Lovells; creek, a small left-hand branch of Brazos River	Palo Pinto.

Atlas sh

Loving; a southwestern county, with an area of 873 square miles. The population was 33; the county seat, Mentone. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 15 inches, and the mean annual temperature 60°.

Low; branch, a left-hand branch of Mountain Creek, tributary to West Fork of Trinity River .... Fort Worth.

Lowell; post village in Erath County.

Lower Keechi; right-hand branch of Trinity River.

Lowman; ford, across Colorado River, in Travis County ...... Austin.

Lowry; post village in Panola County.

Loyal Valley; post village in Mason County; population, 119 (1890) .... Mason.

Lubbock; a northwestern county, with an area of 982 square miles. The population was 293; the county seat, Lubbock. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 18 inches, and the mean annual temperature 60°.

Lubbock; county seat of Lubbock County.

Lucas; post village in Collin County.

Luce; bayou, a tributary of San Jacinto River.

Luckenbach; post village in Gillespie County.

Lueders; post village in Jones County.

Luella; post village in Grayson County.

Lufkin; county seat of Angelina County; population, 1,527.

Luling; city in Caldwell County; population, 1,349.

Lumavista; post village in Zavalla County.

Lumber; post village in Marion County.

Luna; post village in Freestone County.

Lund; post village in Travis County.

Lusk; post village in Throckmorton County.

Luther; post village in Limestone County.

Luzon; post village in Kent County.

Lydia; post village in Red River County.

Lyman; post village in Motley County.

Lynch; creek, a left-hand branch of Colorado River .... Lampasas.

Lynchburg; post village in Harris County.

Lynn; a northwestern county, with an area of 821 square miles. The population was 17. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 19 inches, and the mean annual temperature 60°.

Lyons; post village in Burleson County.

Lyra; post village in Palo Pinto County.

Lytle; creek, a right-hand tributary to Clear Fork of Brazos River .... Abilene.

Lytle; gap in Callahan County .... Abilene.

Lytle; post village in Atascosa County.

Lytton Springs; post village in Caldwell County.

McAdams; post village in Walker County.

McAdams; peak in Palo Pinto County .... Palo Pinto.

McCann; branch, a small left-hand branch of West Fork of Trinity River .... Fort Worth.

McCarthy; spring in Tom Green County .... San Angelo.

	Atlas sheet.
McCathrine; mountain in Shackelford County	Albany.
McClanahan; post village in Falls County.	
McClellan; creek, a head branch of the North Fork of Red River, in the Panhandle.	
McCoy; post village in Kaufman County.	
McCraven; post village in Washington County.	
McCulloch; a central county, with an area of 1,110 square miles. The population was 3,960; the county seat, Brady. The mean magnetic declination in 1900 was 9° 15′. The mean annual rainfall is 28 inches, and the mean annual temperature 65°.	Mason. Eden. Brady.
McCulloch; post village in Red River County.	
McDade; post village on the Houston and Texas Central Railroad, in Bastrop County	Bastrop.
McDowell; creek, a small left-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Albany.
McDuff; post village in Bastrop County.	
McGirk; post village in Hamilton County	Hamilton.
McGregor; post village at the crossing of the St. Louis, Arkansas and Texas, and the Gulf, Colorado and Santa Fe railroads, in McLennan County; population, 1,435	Temple.
Machae; creek, a small left-hand intermittent branch of Colorado River	Hayrick.
McKenzie; lake in Edwards County; elevation, 2,103 feet	Rock Springs.
McKinney; branch, a small left-hand intermittent branch of Bosque River	Stephenville.
McKinney; county seat of Collin County; population, 4,342.	
McKinney Falls; village in Travis County	Austin.
McLendons; post village in Rockwall County.	
McLennan; a north central county, with an area of 1,080 square miles. The population was 59,772; the county seat, Waco. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 42 inches, and the mean annual temperature 66°. The county is traversed by the San Antonio and Aransas Pass, the Houston and Texas Central, the Gulf, Colorado and Santa Fe, the Missouri, Kansas and Texas, the St. Louis Southwestern, and the Texas Central railroads.	Temple. Meridian.
McMahan; post village in Caldwell County.	
McMinns; tank, a reservoir in Presidio County	San Carlos.
McMullen; a southern county, with an area of 1,180 square miles. The population was 1,024; the county seat, Tilden. The mean magnetic declination in 1900 was 8°15′. The mean annual rainfall is 30 inches, and the mean annual temperature 70°.	
McNeil; post village in Travis County	Austin.
McNutt; creek, a small left-hand branch of Brushy Creek, tributary to San Gabriel River	Georgetown.
McQueeney; post village in Guadalupe County.	
McQuirt; mountain in Erath County	Stephenville.
Mabank; post village in Kaufman County.	
Macdona; post village in Bexar County.	
Macedonia; post village in Walker County.	

	Atlas sheet.
Macomb; post village in Grayson County.	
Macon; post village in Franklin County.	
Macune; post village in San Augustine County.	
Macy; post village in Brazos County.	
Madden; village on the Southern Pacific Railroad, in El Paso County	Fort Hancock.
Madera; canyon, in Davis mountains	Valentine. Fort Davis.
Madison; a southeastern county, with an area of 488 square miles. The population was 10,432; the county seat, Madisonville. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 48 inches, and the mean annual temperature 68°.	
Madisonville; county seat of Madison County; population, 418 (1890).	
Madras; post village in Red River County.	
Magill; creek, a small right-hand branch of Pecan Creek, tributary to Llano River	Llano.
Magnolia Springs; post village in Jasper County.	
Mahard; creek, a left-hand branch of Cedar Creek, tributary to Colorado River	Austin.
Mahomet; village on North Fork of San Gabriel River, in Burnet County	Georgetown.
Mahon; post village in Panola County.	
Major; peak in Jeff Davis County; elevation, 5,822 feet	Fort Davis.
Majors; post village in Franklin County.	
Malakoff; post village in Henderson County.	
Malcom; post village in Smith County.	
Mallard; post village in Montague County.	
Malone; mountains in El Paso County	Fort Hancock.
Malone; village on the Southern Pacific Railroad, in El Paso County	Fort Hancock.
Maloney; post village in Ellis County.	
Malta; post village in Bowie County.	
Manavillas; creek, a left-hand branch of Rio Grande River, mainly in Brewster County.	
Mance; post village in Henderson County.	
Manchaca; post village in Travis County.	
Manchaca Springs; village in Travis County	Austin.
Manchester; post village in Red River County.	
Manda; post village in Travis County.	
Mangum; post village in Eastland County.	
Manheim; post village in Lee County.	
Manila; post village in Cherokee County.	
Mann; post village in Navarro County.	
Manor; post village on the Houston and Texas Central Railroad, in Travis County; population, 405 (1890)	Austin.
Mansfield; post village on Walnut Creek, in Tarrant County; population, 694	Fort Worth.
Mansker; lake in Eastland County	Eastland.
Mantha; post village in Upshur County.	
Manvel; post village in Brazoria County.	
Maple; post village in Collin County.	

	Atlas sheet.
Marak; post village in Milam County.	
Marathon; post village in Brewster County.	
Marble Falls; post village on Colorado River, in Burnet County; population, 587 (1890)	Burnet.
Marcelena; post village in Wilson County.	
Marcy; post village in Haskell County.	
Marfa; county seat of Presidio County, situated on the Southern Pacific Railroad	Marfa.
Margaret; peak in Coke County	Hayrick.
Margaret; post village in Foard County.	
Marietta; post village in Cass County.	
Marine; post village in Tarrant County.	
Marion; a northeastern county, with an area of 384 square miles. The population was 10,754; the county seat, Jefferson. The mean magnetic declination in 1900 was 7°. The mean annual rainfall is 50 inches, and the mean annual temperature 65°. The county is traversed by the Texas and Pacific and the Missouri, Kansas and Texas railroads.	
Marion; creek, a left-hand branch of West Fork of Trinity River	Fort Worth.
Marion; post village in Guadalupe County.	
Markley; post village in Young County.	
Marlin; county seat of Falls County; population, 3,092.	
Marquez; post village in Leon County.	
Mars; post village in Van Zandt County.	
Marshall; county seat of Harrison County; population, 7,855.	
Marshall; creek, a head branch of left-hand Hickory Creek, tributary to Leon River	Llano.
Marshall Ford; village in Travis County	Austin.
Mart; post village in McLennan County.	
Martin; a northwestern county, with an area of 900 square miles. The population was 332; the county seat, Stanton. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 18 inches, and the mean annual temperature 60°. The county is traversed by the Texas and Pacific Railway.	
Martin; creek, a right-hand branch of Sabine River in northeastern Texas.	
Martin; creek, a left-hand branch of Leon River	Mason.
Martin; gap in Hamilton County	Meridian.
Martin; branch, a small left-hand branch of Nolands River, tributary to Brazos River	Cleburne.
Martindale; post village in Caldwell County.	
Martins; creek, a right-hand branch of Copperas Creek, tributary to Little River	Eastland.
Martinsburg; village on Williams Creek, in Gillespie County	Fredericksburg.
Martins Mills; post village in Van Zandt County.	
Martinsville; post village in Nacogdoches County.	
Mary; creek, a small right-hand branch of Lampasas River, tributary to Little River	Hamilton.
Marys; creek, a left-hand branch of Clear Fork of Trinity River, tributary to West Fork of Trinity River.	Weatherford. Fort Worth.
Marystown; post village in Johnson County	Cleburne.
Marysville; post village in Cooke County.	

	Atlas sheet.
Mason; a central county, with an area of 968 square miles. The population was 5,573; the county seat, Mason. The mean magnetic declination in 1900 was 8° 55′. The mean annual rainfall is 28 inches, and the mean annual temperature 65°.	Llano. Mason.
Mason; county seat of Mason County	Mason.
Massey; post village in Hill County	Waco.
Matador; county seat of Motley County.	
Matagorda; a southeastern county, with an area of 1,135 square miles. The population was 6,097; the county seat, Bay City. The mean magnetic declination in 1900 was 7° 15′. The mean annual rainfall is 45 inches, and the mean annual temperature 70°.	
Matagorda; bay on the Texas coast, protected by a long, low, sand bar.	
Matagorda; island protecting San Antonio Bay.	
Matagorda; town in Matagorda County; population, 399 (1890).	
Mathews; branch, a small left-hand branch of Brazos River	Weatherford.
Mathis; post village in San Patricio County.	
Matinburg; post village in Camp County.	
Matson; post village in Hill County.	
Matthews; post village in Colorado County.	
Mattie; post village in Stonewall County.	
Maud; post village in Bowie County.	
Maurin; post village in Gonzales County.	
Maverick; post village in Runnels County	Hayrick.
Maverick; a southern county, with an area of 1,332 square miles. The population was 4,066; the county seat, Eagle Pass. The mean magnetic declination in 1900 was 7° 40′. The mean annual rainfall is 22 inches, and the mean annual temperature 70°. The county is traversed by the Southern Pacific Railroad	Brackett.
Maverick; creek, a small left-hand branch of Brady Creek, tributary to San Saba River	Eden.
Maverick; creek, a small right-hand branch of East Nueces River, tributary to Nueces River	Nueces.
Maxdale; post village on Lampasas River in Bell County	Georgetown.
Maxdale; post village in Bell County.	
Maxey; post village in Lamar County.	
Maxon; creek, a right-hand branch of Pecos River, in Pecos County.	
Maxwell; post village in Caldwell County.	
May; post village in Brown County	Brownwood.
Maynard; post village in San Jacinto County.	
Maynard: creek, a right-hand branch of North Leon River, tributary to Leon River	Rock Springs.
Maysfield; post village in Milam County.	
Mecca; post village in Madison County.	
Medina; a central county, with an area of 1,284 square miles. The population was 7,783; the county seat, Hondo. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 28 inches, and the mean annual temperature 67°. The county is traversed by the Southern Pacific and the International and Great Northern railroads.	

	Atlas sheet.
Medina; post village in Bandera County.	
Medina; river, a right-hand branch of San Antonio River.	
Medio; creek, a small branch of Blanco Creek, in southern Texas.	
Melissa; post village in Collin County.	
Melrose; post village in Nacogdoches County.	
Memphis; county seat of Hall County.	
Menard; a central county, with an area of 888 square miles. The population was 2,011; the county seat, Menardville. The mean magnetic declination in 1900 was 9° 15′. The mean annual rainfall is 25 inches, and the mean annual temperature 65°.	San Angelo. Eden. McKavett.
Menardville; the county seat of Menard County; population, 185 (1890).	
Mendoza; post village in Caldwell County.	
Menlow; post village in Hill County.	
Mentz; post village in Colorado County.	
Mercer; creek, a left-hand branch of South Leon Creek, tributary to Little River	Brownwood.
Mercers; gap in Comanche County	Brownwood.
Meridian; city on Bosque River; population, 923	Meridian.
Meridian; creek, a right-hand branch of Bosque River	Meridian.
Meridian; mountain in Edwards County	Nueces.
Merit; post village in Hunt County.	
Merkel; post village on the Texas and Pacific Railway, in Taylor County; population, 353 (1890)	Sweetwater.
Merle; post village in Burleson County.	
Merrilltown; post village in Travis County.	
Merriman; village on Colony Creek, in Eastland County	Eastland.
Merrivale; post village in Bosque County.	
Mertens; post village in Hill County.	
Mesa; post village in Grimes County.	
Mesquite; post village on the Texas and Pacific Railway, in Dallas County; population, 406	Dallas.
Mesquite; branch, a small left-hand tributary to West Fork of Trinity River	Fort Worth.
Mesquite; creek, a right-hand branch of Little River	Burnet.
Mesquite; creek, a small left-hand branch of Leon River, tributary to Little River	Hamilton.
Mesquite; creek, a small left-hand branch of Threadgill Creek, tributary to Leon River.	Kerrville. Mason.
Mesquite; creek, a right-hand branch of Brazos River	Granbury.
Metcalf; gap in Palo Pinto County	Palo Pinto.
Mettina; post village in Falls County.	
Mexia; city in Limestone County; population, 2,393.	
Meyersville; post village in Dewitt County.	
Miami: county seat of Roberts County.	
Middle; valley in Schleicher County	Fort McKavett.
Middle; creek, a small right-hand branch of South Palo Pinto Creek, tributary to Brazos River	Stephenville.
Middle; creek, a small right-hand tributary to Brazos River	Palo Pinto.
Middle; fork, a small left-hand branch of South Fork of Chambers Creek, tributary to Trinity River	Cleburne.

	Atlas sheet.
Middle Bosque; creek, a right-hand branch of South Bosque River, tributary to Bosque River	Waco.
Middle Mustang; creek, a right-hand branch of Mustang Creek, tributary to Colorado River	Ballinger.
Middle Noland; creek; a head branch of Nolands River	Granbury.
Middleton; post village in Leon County.	
Midland; a southwestern county, with an area of 972 square miles. The population was 1,741; the county seat, Midland. The mean magnetic declination in 1900 was 10° 40′. The mean annual rainfall is 18 inches, and the mean annual temperature 60°. The county is traversed by the Texas and Pacific Railway.	
Midland; county seat of Midland County; population, 722 (1890).	
Midlothian; post village in Ellis County; population, 832.	
Midway; post village in Madison County.	
Midyett; post village in Panola County.	
Miguel; post village in Frio County.	
Milam; post village in Sabine County.	
Milam; a southeastern county, with an area of 1,044 square miles. The population was 39,666; the county seat, Cameron. The mean magnetic declination in 1900 was 8° 05′. The mean annual raintall is 42 inches, and the mean annual temperature 67°. The county is traversed by the Gulf, Colorado and Santa Fe, the San Antonio and Aransas Pass, and the International and Great Northern railroads.	Abilene. Bastrop.
Milano; post village in Milam County.	
Milburn; post village in McCulloch County.	
Milburn; village in San Saba County	Brady.
Mildred; post village in Navarro County.	
Miles Station; post village on the Gulf, Colorado and Santa Fe Railroad, in Runnells County	Hayrick.
Milford; post village in Ellis County; population, 653.	
Military; mountain in Edwards County; elevation, 2,018 feet.	Nueces.
Military; reservation on the White Oaks Railroad, in El Paso County	El Paso.
Mill; branch, a small left-hand intermittent branch of Leon River, in Comanche County	Stephenville.
Mill; branch, a small right-hand tributary of Brazos River	Palo Pinto.
Mill; creek, a right-hand branch of Clear Fork of Brazos River.	Albany.
Mill; creek, a right-hand branch of Leon River	Mason.
Mill; creek, a right-hand branch of Lampasas River, tributary to Little River	Georgetown.
Mill; creek, a left-hand branch of Bluff Creek, tributary to Colorado River	Abilene.
Mill; creek, a small left-hand branch of Silver Creek, tributary to West Fork of Trinity River.	Weatherford. Fort Worth.
Mill; creek, a small right-hand branch of Red River, in northeastern Texas.	
Miller; creek, a left-hand intermittent branch of East Nueces River, tributary to the Nueces	Brackett.
Miller; creek, a small left-hand branch of Llano River, tributary to Colorado River	Llano.

	Atlas sheet.
Miller; creek, a small right-hand intermittent branch of East Nueces River, tributary to Nueces River	Nueces.
Miller; village on the Houston and Texas Central Railroad in Dallas County	Dallas.
Millergrove; post village in Hopkins County.	
Millers; creek, a right-hand branch of Pedernales River	Blanco.
Millerton; post village in San Augustine County.	
Millett; post village in Lasalle County.	
Millheim; post village in Austin County.	
Millican; post village in Brazos County.	
Mills; a central county, with an area of 604 square miles. The population was 7,851; the county seat, Goldthwaite. The mean magnetic declination in 1900 was 9° 15′. The mean annual rainfall is 32 inches, and the mean annual temperature 66°. The county is traversed by the Gulf, Colorado and Santa Fe Railway.	San Saba. Lampasas. Hamilton. Brownwood.
Mills; post village in Freestone County.	
Millsap; post village on the Texas and Pacific Railway in Parker County	Palo Pinto.
Millseat; post village in Hays County.	
Millwood; post village in Collin County.	
Milner; post village in Cass County.	
Milo; post village in Briscoe County.	
Milton; post village in Lamar County.	
Mina; post village in Hunt County.	
Minden; post village in Rusk County.	
Mine; creek, a right-hand branch of Second Yegua Creek	Bastrop.
Mineola; city in Wood County; population, 1,725.	
Minera; post village in Webb County.	
Mineral; post village in Bee County.	
Mineral Wells; town on Pollards Creek, in Palo Pinto County; population, 2,048	Palo Pinto.
Minerva; post village in Milam County.	
Mingo; post village in Denton County.	
Mingus; lake in Palo Pinto County	Palo Pinto.
Mingus; post village in Palo Pinto County.	
Mink; post village in Montgomery County.	
Minter; post village in Lamar County.	
Miriam; post village in Liberty County.	
Mission Valley; post village in Victoria County.	
Missouri City; post village in Fort Bend County.	
Mitchell; a northwestern county, with an area of 807 square miles. The population was 2,855; the county seat, Colorado. The mean magnetic declination in 1900 was 10° 20′. The mean annual rainfall is 20 inches, and the mean annual temperature 61°. The county is traversed by the Texas and Pacific Railway.	
Mitchell; bend in Brazos River, in Hood and Somervell counties	Granbury.
Mitchell; branch, a small left-hand branch of Pompey Creek, tributary to Pecan Bayou	Brownwood.
Mitre; peak in Jeff Davis County	Alpine.
Mixon; post village in Cherokee County.	

Atlas sheet.

Moale; creek, a small right-hand branch of Canadian River.

Mobeetie; county seat of Wheeler County.

Mobile; post village in Tyler County.

Moffat; post village in Bell County .... Temple.

Mohegan; post village in Hunt County.

Monahans; post village in Ward County.

Monaville; post village in Waller County.

Monkstown; post village in Fannin County.

Monroe; post village in Rusk County.

Monserate; post village in Lavaca County.

Montague; a north central county, with an area of 976 square miles. The population was 24,800; the county seat, Montague. The mean magnetic declination in 1900 was 8° 45′. The mean annual rainfall is 35 inches, and the mean annual temperature 63°. The county is traversed by the Missouri, Kansas and Texas, the Chicago, Rock Island and Texas, and the Fort Worth and Denver City railways.

Montague; county seat of Montague County; population, 579.

Montalba; post village in Anderson County.

Mont Belvieu; post village in Chambers County.

Montell; creek, a right-hand branch of East Nueces River, tributary to Nueces River .... Nueces.

Montell; post village in Uvalde County .... Nueces.

Montfort; post village in Navarro County.

Montgomery; a southeastern county, with an area of 1,066 square miles. The population was 17,067; the county seat, Conroe. The mean magnetic declination in 1900 was 8° 10′. The mean annual rainfall is 50 inches, and the mean annual temperature 68°. The county is traversed by the Gulf, Colorado and Santa Fe, the International and Great Northern, and the Houston, East and West Texas railways.

Montgomery; post village in Montgomery County.

Monthalia; post village in Gonzales County.

Monticello; post village in Titus County.

Montopolis; post village on Colorado River, in Travis County . Austin.

Montvale; village on the Gulf, Colorado and Santa Fe Railway, in Lampasas County .... Lampasas.

Montvale; post village in Coleman County.

Monument; peak in Fisher County .... Roby.

Moody; post village on the Gulf, Colorado and Santa Fe Railway, in McLennan County; population, 432 (1890) .... Temple.

Moore; a county situated in the Panhandle, with an area of 885 square miles. The population was 209; the county seat, Dumas. The mean magnetic declination in 1900 was 11° 15′. The mean annual rainfall is 18 inches, and the mean annual temperature 57°.

Moore; post village in Frio County.

Moore; creek, a small right-hand branch of Mercer Creek, tributary to Little River .... Brownwood.

Mooreville; post village in Falls County.

Moorhead; post village in Valverde County.

Moores; peak in Llano County .... Llano.

Mooresville; village in Falls County .... Temple.

Atlas sheet.

Morales; post village in Jackson County.

Moran; post village in Shackelford County.

Moravia; post village in Lavaca County.

Moreland; post village in Collin County.

Morg; post village in Stephens County.

Morgan; a city on Steele Creek, at intersection of the Gulf, Colorado and Santa Fe, and the Texas Central railroads, in Bosque County; population, 766 .... Granbury.

Morgan; creek, a left-hand branch of Colorado River .... Burnet.

Morgan; creek, a left-hand branch of Red River, in the Panhandle.

Morgan Mill; post village on North Paluxy Creek, in Erath County .... Stephenville.

Morita; village in Presidio County .... Shafter.

Morman; creek, a small right-hand branch of Threadgill Creek, tributary to Leon River. { Kerrville. Mason.

Mormongrove; post village in Grayson County.

Moro; mountain in Runnels County .... Abilene.

Moro; post village in Taylor County.

Morris; a northeastern county, with an area of 278 square miles. The population was 8,220; the county seat, Daingerfield. The mean magnetic declination in 1900 was 7° 15′. The mean annual rainfall is 50 inches, and the mean annual temperature 65°. The county is traversed by the St. Louis Southwestern, and the Missouri, Kansas and Texas railways.

Morris; post village in Howard County.

Morris Ranch; post village in Gillespie County.

Mortimer; post village in Milam County.

Moscow; post village in Polk County.

Mosheim; post village in Bosque County.

Mosley; post village in Montgomery County.

Mossville; post village in Cooke County.

Motley; a northwestern county, with an area of 984 square miles. The population was 1,257; the county seat, Matador. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 22 inches, and the mean annual temperature 60°.

Motley; post village in Rusk County.

Mott; post village in Angelina County.

Moulton; post village in Lavaca County; population, 231 (1890).

Mound; post village in Coryell County.

Mountain; branch, a small right-hand branch of Leon River, tributary to Little River .... Eastland.

Mountain; creek, a right-hand branch of West Fork of Trinity River, tributary to Trinity River. { Cleburne. Fort Worth. Dallas.

Mountain; pass in mountain in Palo Pinto County .... Sweetwater.

Mountain City; village in Hess County .... Austin.

Mountainhome; post village in Kerr County.

Mountain Peak; post village in Ellis County.

Mountain Spring; post village in Cooke County.

Mount Airy; village on the Texas Central Railroad, in Erath County .... Stephenville.

	Atlas sheet
Mount Barker; mountain in Travis County	Austin.
Mount Blanco; post village in Crosby County.	
Mountcalm; post village in Hill County.	
Mount Carmel; post village in Smith County.	
Mount Connor; mount in Shackelford County	Albany.
Mount Enterprise; post village in Rusk County.	
Mount Hudson; mount in Gillespie County	Fredericksburg.
Mount Joy; post village in Delta County.	
Mount Nebo; mount in Gillespie County	Fredericksburg.
Mount Ord; mountain in Brewster County	Albany.
Mount Pleasant; county seat of Titus County; population, 963 (1890).	
Mount Selman; post village in Cherokee County.	
Mount Sylvan; post village in Smith County.	
Mount Vernon; county seat of Franklin County; population, 589 (1890).	
Mourvall; bayou, a right-hand branch of Sabine River, in northeast Texas.	
Mud; post village in Travis County.	
Mud; creek, a right-hand branch of Jim Ned Creek, tributary to Pecan Bayou	Coleman.
Mud; creek, a left-hand branch of Elm Creek, tributary to Colorado River	Ballinger.
Mud; creek, a head branch of Angelina River, in eastern Texas.	
Mud; creek, a small left-hand branch of Brazos River	Weatherford.
Mud; creek, a left-hand branch of Angelina River.	
Muddy; creek, a right-hand tributary to East Fork of Trinity River	Dallas.
Muela; creek, a right-hand intermittent tributary to Nueces River	Brackett.
Muellersville; post village in Washington County.	
Muenster; post village in Cooke County.	
Mukewater; creek, a left-hand branch of Home Creek, tributary to Colorado River.	Coleman. Brady.
Mula; creek, a right-hand tributary to Nueces River	Brackett.
Mulberry; post village in Fannin County.	
Mulberry; creek, a right-hand branch of Clear Fork of Brazos River.	Sweetwater. Abilene. Anson.
Mulberry; canyon in Nolan County	Sweetwater.
Muldoon; post village in Fayette County.	
Mule; creek, a right-hand branch of Colorado River	Hayrick.
Mullen; creek, a right-hand branch of Brown Creek, tributary to Pecan Bayou.	Brownwood. San Saba.
Mullin; post village in Mills County.	
Mulock; post village in Hansford County.	
Mumford; post village in Robertson County.	
Munday; post village in Knox County.	
Munroe; village on the Gulf, Colorado and Santa Fe Railway, in Johnson County	Granby.
Munson; post village in Rockwall County.	
Murchison; post village in Henderson County.	
Muriel; post village in Tarrant County.	
Murphy; post village in Collin County.	

	Atlas sheet.
Murphy; creek, a small right-hand branch of Foyle Creek, tributary to Clear Fork of Brazos River	Albany.
Murray; post village in Young County.	
Murvaul; post village in Panola County.	
Muse; post village in Wise County.	
Musgrove; post village in Franklin County.	
Musquiz; canyon in Jeff Davis and Brewster counties	Alpine.
Mustang; post village in Denton County.	
Mustang; branch, a small right-hand intermittent branch of Onion Creek, tributary to Colorado River	Austin.
Mustang; canyon in Anacacho Mountains, in Kinney County	Brackett.
Mustang; creek, a right-hand branch of Little Leon River, tributary to Little River.	Hamilton. Meridian. Gatesville.
Mustang; creek, a left-hand branch of East Bosque River, tributary to Bosque River	Granbury.
Mustang; creek, a left-hand branch of Nolands River, tributary to Brazos River	Cleburne.
Mustang; creek, a right-hand branch of Colorado River	Eden.
Mustang; creek, a left-hand branch of Colorado River	Ballinger.
Mustang; creek, a left-hand branch of Leon River, tributary to Little River	Hamilton.
Mustang; creek, a small left-hand intermittent branch of Meridian Creek, tributary to Bosque River	Meridian.
Mustang; creek, a left-hand branch of Brushy Creek, tributary to San Gabriel River	Taylor.
Mustang; creek, a right-hand intermittent branch of East Nueces River, tributary to Nueces River.	
Mustang; creek, a small stream flowing into Matagorda Bay, a branch of Lavaca River.	
Mustang; island, a low sand bar protecting Corpus Christi Bay.	
Mustang; ridge of mountains in Hays and Travis counties	Austin.
Mustang; water hole, a reservoir in Uvalde County	Brackett.
Mute; branch, a small left-hand intermittent branch of Robinson Creek, tributary to Brazos River	Granbury.
Myers; post village in Burleson County.	
Myra; post village in Cooke County.	
Myrtle Springs; post village in Van Zandt County.	
Nabors; creek, a small left-hand branch of Colorado River	San Saba.
Nacogdoches; a southeastern county, with an area of 962 square miles. The population was 24,663; the county seat, Nacogdoches. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 50 inches, and the mean annual temperature 67°. The county is traversed by the Houston, East and West Texas Railway.	
Nacogdoches; county seat of Nacogdoches County; population, 1,827.	
Nada; post village in Colorado County.	
Nalley; post village in McLennan County.	
Nameless; village on Sandy Creek, in Travis County	Georgetown.
Nanhattie; post village in Coke County.	
Naples; post village in Morris County.	
Naruna; post village in Burnet County	Burnet.

Atlas sheet.

Nash; creek, a right-hand branch of Leon River, tributary to Little River .... Eastland.

Nash; post village in Ellis County.

Nashland; post village in Jefferson County.

Nat; post village in Nacogdoches County.

Nathan; post village in Johnson County.

Navarro; a northeastern county, with an area of 1,136 square miles. The population was 43,374; the county seat, Corsicana. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 44 inches, and the mean annual temperature 66°. The county is traversed by the Houston and Texas Central and the St. Louis Southwestern railroads.

Navasota; city in Grimes County; population, 3,857.

Navasota; river, a large left-hand branch of Brazos River.

Navidad; branch of Lavaca River.

Navidad; post village in Jackson County.

Navo; post village in Denton County.

Neal; post village in Madison County.

Nebo; mountain, in Parker County .... Weatherford.

Nebo; post village in Cherokee County.

Necessity; post village in Stephens County.

Nechanitz; post village in Fayette County.

Neches; post village in Anderson County.

Neches; river, a stream of eastern Texas, flowing into Sabine Lake.

Nederland; post village in Jefferson County.

Needmore post village in Delta County.

Needville; post village in Fort Bend County.

Needy; left-hand branch of Nueces River.

Negley, post village in Red River County.

Negro; creek, a left-hand branch of Nueces River.

Neil; creek, a right-hand branch of Bosque River, heading in three intermittent forks, North, Middle, and South .... Meridian.

Neinda; post village in Jones County; elevation, 1,785 feet .... Roby.

Nelson; creek, a right-hand branch of Trinity River.

Nelsonville; post village in Austin County.

Nelta; post village in Hopkins County.

Nemo; post village in Somervell County.

Neola; post village in Hunt County.

Neri; post village in Hood County.

Nesbitt; post village in Robertson County; population 218, (1890).

Nevada; post village in Collin County; population, 356.

Newark; post village in Wise County.

New Baden; post village in Robertson County.

New Berlin; post village in Guadalupe County.

New Birmingham; post village in Cherokee County; population, 668 (1890).

New Boston; post village in Bowie County; population, 382 (1890).

New Braunfels; county seat of Comal County; population, 2,097.

Newburg; post village on South Leon Creek, in Comanche County .... Brownwood.

	Atlas sheet.
New Caney; post village in Montgomery County.	
New Fountain; post village in Medina County.	
Newharp; post village in Montague County.	
New Hope; village in Parker County	Weatherford.
New Hope; post village in Dallas County	Dallas.
Newlin; post village in Hall County.	
Newman; post village on Clear Fork of Brazos River, in Fisher County; elevation, 1,795 feet	Roby.
Newman Spring; village in Presidio County	San Carlos.
Newport; post village in Clay County.	
New Salem; post village in Rusk County.	
Newsom; village on Clear Fork of Brazos River, in Jones County	Anson.
New Sweden; post village in Travis County	Austin.
Newton; a southeastern county, with an area of 903 square miles. The population was 7,282; the county seat, Newton. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 55 inches, and the mean annual temperature 69°. The county is traversed by the Choctaw, Oklahoma and Gulf Railroad.	
Newton; county seat of Newton County.	
Newton; creek, a small right-hand branch of Five Mile Creek, tributary to Trinity River	Dallas.
New Ulm; post village in Austin County.	
New Waverly; post village in Walker County.	
New York; post village in Henderson County.	
Neyland; post village in Hunt County.	
Neylandville; post village in Hunt County.	
Nicholson; creek, a left-hand branch of Double Mountain Fork, a head branch of Brazos River	Roby.
Nickel; post village in Gonzales County.	
Nigger; creek, a small left-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Albany.
Nigger Head; hill in Burnet County; elevation, 1,313 feet	Burnet.
Nigton; post village in Trinity County.	
Nile; post village in Milam County.	
Nimrod; post village in Eastland County.	
Nipple; peak in Coke County	Hayrick.
Niwot; post village in Coleman County.	
Nix; post village in Lampasas County	Lampasas.
Nixon; post village in Guadalupe County.	
Nixon Spring; village in Presidio County	San Carlos.
Nobility; post village in Fannin County.	
Noble; post village in Lamar County.	
Nockenut; post village in Wilson County.	
Nocona; post village in Montague County; population, 961.	
Nogalus; post village in Trinity County.	
Nolan; a northwestern county, with an area of 828 square miles. The population was 2,611; the county seat, Sweetwater. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 22 inches, and the mean annual temperature 62°. The county is traversed by the Texas and Pacific Railway.	Roby. Sweetwater.

	Atlas sheet.
Nolan; post village in Nolan County.	
Nolands; river, a left-hand branch of Brazos River, heading in West and Middle Noland creeks.	Cleburne. Granbury
Nolanville; post village in Bell County.	
Nolton; creek, a left-hand intermittent tributary to Nueces River	Uvalde.
Nonvay Hill; village in Bosque County	Meridian.
Noodle; creek, a right-hand intermittent branch of Clear Fork of Brazos River	Sweetwater. Roby.
Noodle; post village in Jones County.	
Noonday; post village in Smith County.	
Nopal; post village in Dewitt County.	
Nordheim; post village in Dewitt County.	
Norfolk; post village in Rusk County.	
Norman; hill in Bosque County	Meridian.
Normanna; post village in Bee County.	
Norse; post village in Bosque County	Meridian.
North; creek, a left-hand branch of Guadalupe River	Fredericksburg.
North; fork, a right-hand tributary to Clear Fork, of Brazos River	Albany.
North; fork, a small left-hand branch of Salado Creek, tributary to Little River	Georgetown.
North; valley in Schleicher County	Fort McKavett.
North Cow; bayou, a left-hand branch of South Cow Branch, in McLennan County	Temple.
Northfield; post village in Motley County.	
Northfork; post village in Gray County.	
North Franklin; triangulation station on Franklin Mountains; elevation, 7,140 feet	El Paso.
North Galveston; post village in Galveston County.	
North Grape; creek, a left-hand branch of Pedernales River	Fredericksburg. Blanco.
North Llano; draw, a shallow valley in Sutton County	Fort McKavett.
North Llano; river, a head branch of Llano River	Fort McKavett. Rock Springs.
North Mesquite; creek, a small right-hand branch of East Fork of Trinity River	Dallas.
North Palo; creek, a head branch of Pinto Creek, tributary to Brazos River.	Eastland. Breckenridge.
North Rocky; creek, a head branch of Rocky Creek, tributary to Little River	Burnet.
Northrup; post village in Lee County.	
North Sandy; branch of Lavaca River.	
Norton; post village in Runnels County.	
Norwood; post village in McLennan County.	
Novice; post village in Coleman County	Ballinger.
Novobrad; post village in Lavaca County.	
Nowell; post village in Lamar County.	
Noxville; post village on East Fork of James River, in Kimble County	Kerrville.
Nubia; post village in Taylor County	Sweetwater.

Atlas sheet.

Nueces; a southern county, with an area of 2,460 square miles. The population was 10,439; the county seat, Corpus Christi. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 35 inches, and the mean annual temperature 73°. The county is traversed by the San Antonio and Aransas Pass and the Mexican National railroads.

Nueces; bay, an arm of Corpus Christi Bay extending inland.

Nueces; hill in Uvalde County .... Uvalde.

Nueces; river of southern Texas, heading in the broken country south of the Staked Plains and flowing southeasterly to Corpus Christi Bay. Drainage area, 18,944 square miles; length, 310 miles.

Nuecestown; post village in Nueces County.

Nugent; post village in Jones County.

Nunn; post village in Wilbarger County.

Nunnsville; post village in Lee County.

Nursery; post village in Victoria County.

Nus; post village in Limestone County.

Oak; creek, a left-hand branch of Colorado River in Runnels County .... Hayrick.

Oak; creek, a left-hand intermittent tributary to Rio Grande River .... Marfa.

Oak; hills in Presidio County .... Marfa.

Oak; post village in Ellis County.

Oakalla; post village on Rocky Creek in Burnet County .... Georgetown.

Oak Cliff; post village in Dallas County; population, 3,630.

Oakforest; post village in Gonzales County.

Oakhill; post village in Travis County .... Austin.

Oakhurst; post village in San Jacinto County.

Oakland; post village in Colorado County; population, 250 (1890).

Oakville; county seat of Live Oak County; population, 329 (1890).

Oakwood; post village in Leon County; population, 231 (1890).

Oasis; post village in Dallas County.

Oatman; creek, a small right-hand branch of Llano River, tributary to the Colorado River .... Llano.

Obal; post village in Jefferson County.

Obe; post village in Harrison County.

Obi; hill in Uvalde County .... Uvalde.

Ocee; post village in McLennan County.

Ochiltree; a county situated in the Panhandle, with an area of 864 square miles. The population was 267; the county seat, Ochiltree. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 20 inches, and the mean annual temperature, 57°.

Ochiltree; county seat of Ochiltree County.

Ocker; post village in Bell County.

O'Daniel; post village in Guadalupe County.

Odds; post village in Limestone County.

Odessa; county seat of Ector County.

Odley; creek, a small right-hand intermittent branch of Hackberry Creek, tributary to East Nueces River .... Nueces.

	Atlas sheet.
Oenaville; post village on Big Elm Creek, in Bell County	Temple.
O'Farrell; post village in Cass County.	
Ogarita; post village in Travis County.	
Ogden; post village in Falls County.	
Oglesby; post village in Coryell County.	
Ohio; post village on Plum Creek, in Hamilton County	Hamilton.
Ojuelos; post village in Webb County.	
Oklaunion; post village in Wilbarger County.	
Okra; post village in Eastland County.	
Ola; post village in Kaufman County.	
Oldenburg; post village in Fayette County.	
Oldham; a county situated in the Panhandle, with an area of 1,470 square miles. The population was 349; the county seat, Tascosa. The mean magnetic declination in 1900 wa 11° 30′. The mean annual rainfall is 15 inches, and the mean annual temperature 55°. The county is traversed by the Fort Worth and Denver City Railway.	
Old Round Rock; village on International and Great Northern Railroad, in Williamson County	Georgetown.
Oletha; post village in Limestone County.	
Oleys; creek, a small right-hand intermittent branch of Double Mountain Fork, a head branch of Brazos River.	
Olga; post village in Nolan County.	
Olin; post village in Hamilton County.	
Olive; post village in Hardin County; population, 383 (1890).	
Oliver; creek, a right-hand tributary to Trinity River, in northern Texas.	
Olivia; post village in Calhoun County.	
Olmos; creek, a right-hand intermittent tributary to Nueces River	Brackett.
Olmus; post village in Guadalupe County.	
Olney; post village in Young County.	
Olomos; creek, a small tributary to Alacon Bay.	
Olympus; post village in Childress County.	
Omaha; post village in Morris County; population, 219 (1890).	
Omega; post village in Upshur County.	
Omen; post village in Smith County; population, 508 (1890).	
Ondee; post village in Hamilton County.	
Onion; branch, a small left-hand branch of Kickapoo Creek, tributary to Brazos River	Weatherford.
Onion; creek, a small right-hand tributary to Trinity River	Cleburne.
Onion; creek, a left-hand, intermittent branch of Brady Creek, tributary to San Saba River	Brady.
Onion; creek, a large right-hand branch of Colorado River	Blanco. Austin.
Onion; creek, a small left-hand branch of Station Creek, tributary to Leon River	Temple.
Onion; gap in Brady mountains, through which flows Onion Creek	Brady.
Opal; post village in Wise County.	
Open; hollow in Uvalde County	Brackett.
Open Oak; creek, a right-hand tributary to Trinity River.	

Atlas sheet.

Opossum; creek, a right-hand branch of Williamson Creek, tributary to San Gabriel River. Georgetown. Taylor.

Opossum; hollow, a small left-hand intermittent branch of West Nueces River, tributary to Nueces .... Nueces.

O'Quinn; post village in Fayette County.

Ora; post village in Angelina County.

Oran; post village in Palo Pinto County.

Orange; a southeastern county, with an area of 392 square miles. The population was 5,905; the county seat, Orange. The mean magnetic decination in 1900 was 7° 15′. The mean annual rainfall is 55 inches, and the mean annual temperature 70°. The county is traversed by the Choctaw, Oklahoma and Gulf, the Southern Pacific, and the Texas and New Orleans railroads.

Orange; county seat of Orange County; population, 3,835.

Orangeville; post village in Fannin County.

Orchard; post village in Fort Bend County.

Ord; mountain group of western Texas.

Orelia; post village in Frio County.

Orlena; post village in Cooke County.

Orphans Home; post village in Dallas County.

Osage; post village on Bluff Creek, in Coryell County .... Meridian.

Osborne; post village in Wilbarger County.

Oscar; post village in Bell County.

Oso; creek, a right-hand intermittent branch of Cibolo Creek, tributary to Rio Grande River.

Oso; creek, a small stream flowing into Corpus Christi Bay.

Otis; post village in Bastrop County.

Ottawa; post village in Madison County.

Ottine; post village in Gonzales County.

Otto; post village in Falls County.

Overton; post village in Rusk County; population, 401 (1890).

Ovilla; post village on Red Oak Creek, in Ellis County .... Dallas.

Owenville; post village in Sutton County.

Owlet Green; post village in Van Zandt County.

Oxford; village in Llano County .... Llano.

Oyster; creek, a small stream flowing into the Gulf of Mexico, near the mouth of Brazos River.

Ozark; post village in Lamar County.

Ozona; county seat of Crockett County.

Ozro; post village in Ellis County.

Paces Ferry; post village in Jasper County.

Pacio; post village in Delta County.

Padre; island, a low sand bar stretching along the southern coast from near the mouth of Rio Grande northward to Corpus Christi Bay, inclosing La Guana de la Madre and Alacan bays.

Paducah; county seat of Cottle County.

Page; creek, a small right-hand intermittent branch of West Nueces River, tributary to the Nueces .... Brackett.

Paige; post village on the Houston and Texas Central Railroad, in Bastrop County .... Bastrop.

	Atlas sheet.
Paint; creek, a left-hand branch of Pecan Bayou	Coleman.
Paint; creek, a small right-hand branch of Third Yegua Creek, tributary to Brazos River	Bastrop.
Painted Rock; creek, a small left-hand branch of Rio Grande, in Pecos County.	
Paintrock; post village on Concho River, in Concho County; population, 323 (1890)	Ballinger.
Paisano; village on the Southern Pacific Railroad, in Presidio County	Alpine.
Paisano; post village in Starr County.	
Palace; post village in Van Zandt County.	
Palava; post village in Fisher County.	
Palestine; county seat of Anderson County; population, 8,297.	
Palmer; post village in Ellis County; population, 480.	
Palmer; triangulation station in Kinney County	Brackett.
Palo Alto; creek, a left-hand branch of Pedernales River	Fredericksburg.
Palo Blanco; creek, a right-hand tributary to Nueces River	Brackett.
Palo Duro; head branch of Red River, in the Staked Plains.	
Paloduro; post village in Armstrong County.	
Palo Pinto; county seat of Palo Pinto County	Palo Pinto.
Palo Pinto; a north central county, with an area of 971 square miles. The population was 12,291; the county seat, Palopinto. The mean magnetic declination in 1900 was 9° 10′. The mean annual rainfall is 35 inches, and the mean annual temperature 65°. The county is traversed by the Texas and Pacific Railway.	Breckenridge. Palo Pinto.
Paluxy; post village on Paluxy Creek, in Hood County	Granbury.
Paluxy; creek, a right-hand branch of Brazos River, heading in North and South Paluxy creeks	Granbury.
Pampa; post village in Gray County.	
Pancake; village in Carroll County	Meridian.
Panhandle; county seat of Carson County.	
Pankey; post village in Grimes County.	
Panna Maria; post village in Karnes County.	
Panola; a northeastern county, with an area of 814 square miles. The population was 21,404; the county seat, Carthage. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 50 inches, and the mean annual temperature 66°. The county is traversed by the Texas, Sabine Valley and Northwestern, and the Marshall, Timpson and Sabine Pass railroads.	
Panola; post village in Panola County.	
Pansy; post village in Navarro County.	
Panter; post village in Hood County.	
Panther; creek, a right-hand branch of Leon River	Mason.
Panther; creek, a small left-hand branch of Colorado River	Burnet.
Panther; creek, a small left-hand branch of Palo Pinto Creek, tributary to Brazos River	Palo Pinto.
Papalote; post village in Bee County.	
Paradise; post village in Wise County.	
Paris; county seat of Lamar County; population, 9,358.	
Parita; post village in Bexar County.	
Park; post village in Bowie County.	

Atlas sheet.

Parker; a north central county, with an area of 888 square miles. The population was 25,823; the county seat, Weatherford. The mean magnetic declination in 1900 was 8° 45′. The mean annual rainfall is 38 inches, and the mean annual temperature 65°. The county is traversed by the Texas and Pacific, the Gulf, Colorado and Santa Fe, and the Weatherford, Mineral Wells and Northwestern railroads. Weatherford. Palo Pinto.

Parker; post village in Collin County.

Park Springs; post village in Wise County.

Parmer; a county situated in the Panhandle, with an area of 873 square miles. The population was 34. The mean magnetic declination in 1900 was 11° 30′. The mean annual rainfall is 15 inches, and the mean annual temperature 55°. The county is traversed by the Pecos and Northern Texas Railway.

Parsons; post village on the Gulf, Colorado and Santa Fe Railway in Parker County .... Weatherford.

Partridge; creek, a right-hand branch of Cowhouse Creek, tributary to Little River .... Hamilton.

Parvin; post village in Denton County.

Pasadena; post village in Harris County.

Pass Cavallo; entrance to Matagorda Bay.

Patilo; post village in Erath County.

Pato Gacho; bayou, a right-hand branch of Sabine River, in eastern Texas.

Patrick; post village in McLennan County .... Waco.

Patroon; post village in Shelby County.

Patroon; creek, a right-hand branch of Sabine River, in eastern Texas.

Patterson; post village in Waller County.

Patton, post village on the Gulf, Colorado and Santa Fe Railway, in McLennan County .... Waco.

Pattonville; post village in Lamar County.

Pauli; post village in Montgomery County.

Pauls Store; post village in Shelby County.

Payne; post village in Mills County.

Paynes; gap in Mills County .... Lampasas.

Paynespring; post village in Henderson County.

Payton; post village in Blanco County.

Peach; creek, a tributary to San Jacinto River.

Pearl; post village in Coryell County.

Pearland; post village in Brazoria County.

Pearsall; county seat of Frio County; population, 766 (1890).

Pearson; post village in Montague County.

Pease; river, a right-hand branch of Red River, in northwestern part of the State.

Peaster; post village in Parker County.

Pecan; bayou, a large left-hand branch of Colorado River..... Coleman. Brownwood. San Saba.

Pecan; bayou, a large right-hand branch of Red River, in northeastern Texas.

	Atlas sheet.
Pecan; branch, a tributary to North Bosque River	Temple.
Pecan; creek, a right-hand branch of Trinity River, in northeastern Texas.	
Pecan; creek, a left-hand branch of Live Oak Creek, tributary to Pedernales River.	Kerrville. Fredericksburg.
Pecan; creek, a left-hand branch of Llano River, tributary to the Colorado	Llano.
Pecan; creek, a right-hand branch of Leon River, tributary to Little River	Hamilton.
Pecan; creek, a left-hand tributary to Trinity River	Cleburne.
Pecan; creek, a small right-hand branch of Colorado River	Burnet.
Pecan; creek, a small right-hand branch of Big Elm Creek, tributary to Little River	Temple.
Pecan; creek, a right-hand tributary to Clear Fork of Brazos River	Albany.
Pecan; creek, a right-hand branch of South Concho River, tributary to Concho River	San Angelo.
Pecan; spring in Edwards County	Nueces.
Pecan; spring in the valley of Pecan Creek, in Tom Green County	San Angelo.
Pecan; spring, a small right-hand intermittent branch of Crownest Creek, tributary to Concho River on the left	Hayrick.
Pecangap; post village in Delta County.	
Pecangrove; post village in Coryell County.	
Pecan Springs; village in Sutton County	Fort McKavett.
Pecan Springs; village in Travis County	Austin.
Pecos; county seat of Reeves County; population, 639.	
Pecos; a western county, with an area of 8,312 square miles. The population was 2,360; the county seat, Fort Stockton. The mean magnetic declination in 1900 was 10° 20′. The mean annual rainfall is 16 inches, and the mean annual temperature 65°. The county is traversed by the Southern Pacific Railroad.	
Pecos; river, a large eastern branch of the Rio Grande, which heads in the mountains just east of Santa Fe, N. Mex., and flows in a course generally a little east of south to its junction with the Rio Grande. Length, 663 miles.	
Pedernales; river, a large right-hand branch of Colorado River.	Kerrville. Fredericksburg. Blanco.
Pedro; creek, a right-hand branch of Neches River, in eastern Texas.	
Peede; post village in Kaufman County.	
Peerless; post village in Hopkins County.	
Peister; village in Parker County	Weatherford.
Pelham; post village in Navarro County.	
Pella; post village in Wise County.	
Peloncillo; peak in Kinney County	Brackett.
Pendleton; village on the Gulf, Colorado and Santa Fe Railway, in Bell County	Temple.
Pendleton; post village in Sabine County.	
Pendletonville; post village in Bell County.	

	Atlas sheet.
Penn; post village in Hopkins County.	
Pennington; post village in Trinity County.	
Peoria; post village in Hill County; population, 349 (1890).	
Pepper; creek, a small left-hand branch of Leon River, tributary to Little River	Temple.
Percilla; post village in Houston County.	
Perdiz; creek, a left-hand tributary to Rio Grande River	Marfa.
Perry; post village in Falls County.	
Perry Landing; post village in Brazoria County.	
Perryman; post village in Liberty County.	
Perryville; post village in Wood County.	
Personville; post village in Limestone County.	
Pert; post village in Anderson County.	
Pesch; post village in Washington County.	
Pete; creek, a small right-hand branch of Brazos River	Breckenridge.
Peter; creek, a small left-hand tributary to the Colorado River.	Burnet.
Peters; post village in Austin County.	
Petersburg; post village in Hale County.	
Petteway; post village in Robertson County.	
Pettus; post village in Bee County.	
Petty; post village in Lamar County; population, 206 (1890).	
Peveler; creek, a small right-hand branch of Brazos River	Breckenridge.
Pflugerville; post village in Travis County	Austin.
Phalba; post village in Van Zandt County.	
Phantom; lake in Jeff Davis County	Fort Davis.
Phantom Hill; village on Clear Fork of Brazos River, in Jones County	Anson.
Phelps; post village in Walker County.	
Phillipsburg; post village in Washington County.	
Picaso; creek, a right-hand tributary to Nueces River, in southwestern Texas.	
Pickton; post village in Hopkins County.	
Pidcoke; post village in Coryell County.	
Piedro Pinto; creek, a left-hand branch of the Rio Grande.	
Pierce; post village in Wharton County.	
Pigeon; post village in Erath County.	
Pike; post village in Collin County.	
Pike; peak in Edwards County; elevation, 1,905 feet	Nueces.
Pilgrim; post village in Gonzales County.	
Pilot; knob, a hill in Erath County	Stephenville.
Pilot; branch, a small right-hand branch of Nolands River, tributary to Brazos River	Cleburne.
Pilot; knob, a hill in Williamson County; elevation, 1,160 feet.	Georgetown.
Pilot; knob, a hill in Bosque County	Meridian.
Pilot; knob, a hill in Bosque County	Granbury.
Pilot; knob, a hill in Travis County	Austin.
Pilotgrove; post village in Grayson County.	
Pilot Knob; triangulation station immediately south of Williamson County	Austin.
Pilot Point; village in Denton County; population, 1,090 (1890).	
Pinckney; post village in Polk County.	
Pine; post village in Camp County.	

	Atlas sheet.
Pine; creek, a small right-hand branch of Red River, in northeastern Texas.	
Pineforest; post village in Hopkins County.	
Pinegrove; post village in Henderson County.	
Pinehill; post village in Rusk County.	
Pine Island; bayou, a right-hand branch of Neches River.	
Pine Mills; post village in Wood County.	
Pine Valley; post village in Walker County.	
Piney; creek, a left-hand branch of Colorado River	Bastrop.
Pinkham; post village in Bowie County.	
Pinkston; post village in Navarro County.	
Pinta; creek, a small left-hand branch of the Rio Grande, in Presidio County.	
Pintas; small tributary to Alacan Bay.	
Pinto; creek, a left-hand tributary to Rio Grande River	Brackett.
Pinto; canyon in Presidio County	Ruidosa.
Pinto; mountain in Kinney County; elevation, 1,551 feet	Brackett.
Pioneer; post village in Eastland County.	
Pipecreek; post village in Bandera County.	
Pirtle; post village in Rusk County.	
Pisek; post village in Colorado County.	
Pittbridge; post village in Burleson County.	
Pittsburg; county seat of Camp County; population, 1,783.	
Pizarro; post village in Erath County.	
Plainview; post village in Hale County.	
Plano; city in Collin County; population, 1,304.	
Plantersville; post village in Grimes County.	
Pleasantgrove; post village in Wood County.	
Pleasanton; county seat of Atascosa County; population, 367 (1890).	
Pleasantpoint; post village in Johnson County	Cleburne.
Pleasant Valley; post village in Dallas County	Dallas.
Pledger; post village in Matagorda County.	
Plehweville; post village in Mason County.	
Plowman; creek, a right-hand branch of Brazos River	Granbury.
Plum; branch, a small right-hand intermittent branch of East Cottonwood Creek, tributary to Clear Fork of Brazos River.	Roby.
Plum; creek, a right-hand branch of Mustang Creek, tributary to Little River.	Hamilton. Meridian.
Plum; creek, a right-hand intermittent branch of Clear Fork of Brazos River	Roby.
Plum; creek, a right-hand tributary to Clear Fork of Brazos River	Albany.
Plum; post village in Fayette County.	
Pluto; post village in Ellis County.	
Pocahontas; post village in Montgomery County.	
Poe; post village in Blanco County.	
Poer; post village in Bowie County.	
Poetry; post village in Kaufman County.	
Point; peak in Llano County	Llano.
Point; post village in Rains County.	
Pointblank; post village in San Jacinto County.	

	Atlas sheet.
Polecat; creek, a right-hand branch of Hackberry Creek, tributary to Nueces River	Nueces.
Polecat; springs in Edwards County	Nueces.
Polk; a southeastern county, with an area of 1,110 square miles. The population was 14,447; the county seat, Livingston. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 50 inches, and the mean annual temperature 68°. The county is traversed by the Houston, East and West Texas Railway.	
Polk; creek, a right-hand intermittent branch of Home Creek, tributary to Colorado River.	Ballinger. Coleman.
Pollards; creek, a left-hand branch of Brazos River	Palo Pinto.
Pollok; post village in Angelina County.	
Polly; post village in Bandera County.	
Polvo; village on Rio Grande River, in Presidio County	Polvo.
Pompey; creek, a left-hand branch of Blanket Creek, tributary to Pecan Bayou	Brownwood.
Pompey; mountains in Mills County	Brownwood.
Ponder; post village in Denton County.	
Pone; post village in Rusk County.	
Pontotoc; post village in Mason County	Llano.
Pony; creek, a right-hand branch of Colorado River	Ballinger.
Pony; creek, a right-hand branch of Paluxy Creek, tributary to Brazos River.	Stephenville. Granbury.
Poolville; post village in Parker County	Weatherford.
Poor; hollow, a valley in Schleicher County	Fort McKavett.
Pope; post village in Bowie County.	
Popher; post village in Angelina County.	
Port Arthur; post village in Jefferson County; population, 900.	
Port Bolivar; post village in Galveston County.	
Porters; post village in Montgomery County.	
Porters Bluff; post village in Navarro County.	
Porter Springs; post village in Houston County.	
Portland; post village in San Patricio County.	
Port Lavaca; county seat of Calhoun County; population, 365 (1890).	
Port Sullivan; post village in Milam County.	
Post; mountain in Burnet County; elevation, 1,556 feet	Burnet.
Post Oak; branch, a small left-hand branch of Gonzales Creek, tributary to Clear Fork of Brazos River	Breckenridge.
Post Oak; branch, a small right-hand branch of Little Cedar Creek, tributary to Brazos River	Breckenridge.
Post Oak; creek, a small left-hand branch of Colorado River	Burnet.
Post Oak; creek, a small left-hand branch of Clear Fork of Brazos River	Anson.
Post Oak; creek, a right-hand tributary to Clear Fork of Brazos River	Albany.
Postoak; post village in Jack County.	
Post Oak; ridge of mountains in Burnet and Travis counties	Burnet. Georgetown.
Potatoe; hill in Comanche County	Brownwood.
Poteet; post village in Atascosa County.	

	Atlas sheet.
Potosi; post village in Taylor County.	
Potter; a county situated in the Panhandle, with an area of 874 square miles. The population was 1,820; the county seat, Amarillo. The mean magnetic declination in 1900 was 11° 15′. The mean annual rainfall is 18 inches, and the mean annual temperature 57°. The county is traversed by the Fort Worth and Denver City, and the Pecos Valley and Northeastern railways.	
Potters; peak in Lampasas County	Lampasas.
Pottsboro; post village in Grayson County, population, 400.	
Pottsville; post village on Cowhouse Creek, in Hamilton County	Hamilton.
Powderly; post village in Lamar County.	
Powell; post village in Navarro County.	
Powelldale; mountains in Bosque County	Granbury.
Powelldale; village on Mesquite Creek, in Bosque County	Granbury.
Praha; post village in Fayette County.	
Prairie; creek, a left-hand branch of Elm Fork of Trinity River, in Dallas County	Dallas.
Prairie; creek, a small left-hand intermittent branch of Paluxy Creek, tributary to Brazos River	Granbury.
Prairie; gap in Brown County	Brownwood.
Prairie; valley in Hill County	Waco.
Prairiedell; post village in Bell County.	
Prairie Dog; fork, one of the two head branches of Red River, in the Panhandle.	
Prairiegrove; post village in Limestone County.	
Prairiehill; post village in Limestone County.	
Prairie Lea; post village in Caldwell County.	
Prairie Plains; post village in Grimes County.	
Prairieview; post village in Waller County.	
Prairieville; post village in Kaufman County.	
Prattville; post village in Delta County.	
Prescott; creek, a small left-hand branch of Colorado River	San Saba.
Presidio; post village on the Rio Grande, in Presidio County	Shafter.
Presidio; a western county, with an area of 3,970 square miles. The population was 3,673; the county seat, Marfa. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 12 inches, and the mean annual temperature 65°. The county is traversed by the Southern Pacific Railroad.	Shafter. Ruidosa. Albany. Marfa. San Carlos. Chispa. Valentine.
Presidio; creek, a small left-hand branch of Rio Grande, in Presidio County.	
Preston; post village in Grayson County.	
Price; post village in Anderson County.	
Priddy; post village in Mills County.	
Prieta; creek, a right-hand tributary to Nueces River, in southwestern Texas.	
Princeton; post village in Collin County.	
Pritchett; post village in Upshur County.	
Proctor; post village in Comanche County.	
Proffitt; post village in Young County.	

	Atlas sheet.
Progreso; post village in Hidalgo County.	
Prospect; post village in Clay County.	
Prosper; post village in Collin County.	
Providence; post village in Van Zandt County.	
Pruitt; post village in Van Zandt County.	
Pueblo; village in Coleman County	Brady.
Puertacitas; mountains in Presidio County; elevation, 6,000 feet	Albany.
Pulliam; creek, a right-hand tributary to Nueces River	Nueces.
Pumpville; post village in Valverde County.	
Purdon; post village in Navarro County.	
Purley; post village in Franklin County.	
Purmela; post village in Coryell County.	
Pursley; post village in Navarro County.	
Purves; post village in Erath County.	
Putnam; post village in Callahan County.	
Pyburn; post village in Freestone County.	
Pylas; post village in Rusk County.	
Pyramid; rock on Riley Mountain; elevation, 1,747 feet	Llano.
Quanah; county seat of Hardeman County; population, 1,651.	
Quarry; creek, a right-hand branch of Valley Creek, tributary to Colorado River	Hayrick.
Quarry; post village in Washington County.	
Queen City; post village in Cass County; population, 672 (1890).	
Quil Miller; right-hand tributary to West Fork of Trinity River.	Cleburne. Fort Worth.
Quintan; post village in Hunt County.	
Quintana; post village in Brazoria County; population, 475 (1890).	
Quitaque; post village in Briscoe County.	
Quitman; arroyo, a left-hand intermittent branch of Rio Grande	Eagle Mountain.
Quitman; cañon between Quitman Mountains and Devil Ridge in El Paso County	Sierra Blanco.
Quitman; county seat of Wood County.	
Quitman; mountains in El Paso County; elevation, 5,902 feet	Fort Hancock.
Quito; post village in Leon County.	
Rabb; post village in Fayette County.	
Rabbit; creek, a right-hand branch of Sabine River, in northeastern Texas.	
Rabke; post village in Dewitt County.	
Racetrack; post village in Delta County.	
Radford; post village in Karnes County.	
Ragsdale; post village in Fannin County.	
Rail; post village in Hamilton County.	
Rainbow; post village in Somervell County.	
Rains; a northeastern county, with an area of 252 square miles. The population was 6,127; the county seat, Emory. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 45 inches, and the mean annual temperature 65°. The county is traversed by the Missouri, Kansas and Texas Railway.	
Rainsville; post village in Shelby County.	

	Atlas sheet.
Rainy; creek, a right-hand tributary to Clear Fork of Brazos River	Abilene.
Raisin; post village in Victoria County.	
Ramirena; post village in Live Oak County.	
Ranch; creek, a small right-hand branch of San Saba River	Mason.
Rancheria; village on Alamita Creek, in Presidio County	Marfa.
Rancheria; hills in Presidio County	Marfa.
Rancherios; canyon in Presidio County	Polvo.
Rancherios; village in Presidio County	Polvo.
Ranchero; creek, a head branch of Frio River.	
Rancho; post village in Gonzales County.	
Randado; post village in Zapata County.	
Randall; a county situated in the Panhandle, with an area of 872 square miles. The population was 963; the county seat, Canyon. The mean magnetic declination in 1900 was 11° 15′. The mean annual rainfall is 18 inches, and the mean annual temperature 57°. The county is traversed by the Pecos and Northern Texas Railway.	
Randals Store; post village in Palo Pinto County.	
Randol; post village in Tarrant County.	
Randolph; post village in Fannin County.	
Raney; post village in Hunt County.	
Ranger; spring in Comanche County	Brownwood.
Ranger; village on the Texas and Pacific Railway, in Eastland County	Eastland.
Rankin; post village in Ellis County.	
Ranney; creek, a right-hand intermittent branch of Middle Bosque Creek, tributary to Brazos River	Meridian.
Rast; post village in Van Zandt County.	
Ratcliff; post village in Houston County.	
Ratler; post village in Mills County.	
Rattan; post village in Delta County.	
Rattlesnake; gap in Comanche County	Eastland.
Rattlesnake; mountain in Eastland County	Eastland.
Raven; creek, a small right-hand intermittent branch of Clear Fork of Brazos River	Roby.
Ravenna; post village in Fannin County; population 290.	
Rawhide; creek, a small right-hand branch of Farmers Branch, tributary to Elm Fork of Trinity River	Dallas.
Rawlins; post village in Dallas County.	
Ray; knob, a hill in Bell County; elevation 1,060 feet	Georgetown.
Ray; post village in Ellis County.	
Rayland; post village in Foard County.	
Raymond; post village in Leon County.	
Rayner; county seat of Stonewall County; population 301 (1890).	
Raywood; post village in Liberty County.	
Re; post village in Navarro County.	
Reagan; post village in Falls County; population, 298 (1890).	
Reagan; triangulation station in Edwards County	Nueces.
Realitos; post village in Duval County.	
Rector; post village in Denton County.	
Red; fork, a head branch of Colorado River.	

	Atlas sheet.
Red; river, a large western branch of the Mississippi River. It heads in the Staked Plains in eastern New Mexico and flows in a general east and southeast course to its junction with the Mississippi in Louisiana. A large part of its course forms the boundary line between Texas on the south and Oklahoma and Indian Territory on the north. Drainage area, 89,970 square miles; length, 1,045 miles.	
Red Bank; creek, a small right-hand branch of Brazos River	Weatherford.
Red Bank; creek, a left-hand branch of Concho River	Hayrick.
Red Bank; small right-hand branch of Canadian River.	
Redbluff; post village in Jackson County.	
Red Bluff; village on Colorado River, in Lampasas County	San Saba.
Redbranch; post village in Grayson County.	
Red Deer; creek, a small right-hand branch of Canadian River.	
Red Fork Rush; creek, a right-hand branch of South Palo Pinto Creek, tributary to Brazos River	Stephenville.
Redhill; post village in Cass County.	
Redmud; creek, a right-hand branch of California Creek, tributary to Clear Fork of Brazos River	Anson.
Redoak; post village in Ellis County	Dallas.
Red Oak; creek, a right-hand tributary to Trinity River	Dallas.
Red River; a northeastern county, with an area of 1,061 square miles. The population was 29,893; the county seat, Clarksville. The mean magnetic declination in 1900 was 8° 20′. The mean annual rainfall is 45 inches, and the mean annual temperature 64°. The county is traversed by the Texas and Pacific Railway.	
Red Rock; village on the Missouri, Kansas and Texas Railroad, in Tarrant County	Fort Worth.
Redrock; post village in Bastrop County.	
Redwater; post village in Bowie County.	
Redwood; post village in Guadalupe County.	
Reed; post village in Cooke County.	
Reed Settlement; village in Kinney County	Brackett.
Reedville; post village in Caldwell County.	
Reese; creek, a small left-hand branch of Lampasas River, tributary to Little River.	Georgetown. Gatesville.
Reeves; a western county, with an area of 2,610 square miles. The population was 1,847; the county seat, Pecos. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 15 inches, and the mean annual temperature 60°. The county is traversed by the Texas and Pacific, and the Pecos River railroads	Fort Davis.
Refugio; county seat of Refugio County.	
Refugio; a southern county, with an area of 802 square miles. The population was 1,641; the county seat, Refugio. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 40 inches, and the mean annual temperature 70°.	
Regency; post village on Colorado River, in Mills County	San Saba.
Rehburg; post village in Washington County.	
Reily Springs; post village in Hopkins County.	
Reiner; village in Collin County	Dallas.

	Atlas sheet.
Reinhardt; post village on the Gulf, Colorado and Santa Fe Railway, in Dallas County	Dallas.
Reliance; post village in Brazos County.	
Rendon; post village in Tarrant County.	
Renner; post village in Collin County.	
Reno; post village on Walnut Creek, in Parker County	Weatherford.
Resley; creek, a left-hand branch of Leon River, tributary to Little River	Hamilton.
Resort; village on Johnson Creek, in Kerr County	Kerrville.
Retreat; post village in Grimes County.	
Reubes; creek, a right-hand branch of South Brady Creek, tributary to San Saba River	Eden.
Rex; post village in Shelby County.	
Reynolds; branch, a small right-hand branch of Clear Fork of Brazos River, tributary to Brazos River	Albany.
Reynolds; creek, a left-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Albany.
Reynolds; post village in Cherokee County.	
Rhea Mills; post village in Collin County.	
Rheingold; post village in Gillespie County.	
Rhineland; post village in Knox County.	
Rhodes; post village in Rusk County.	
Rhome; post village in Wise County.	
Rhymer; post village in Collin County.	
Rice; post village in Navarro County.	
Rices Crossing; post village in Williamson County	Bastrop.
Richardson; creek, a right-hand branch of Paluxy Creek, tributary to Brazos River.	Stephenville. Granbury.
Richardson; post village on the Houston and Texas Central Railroad, in Dallas County	Dallas.
Richie; post village in McLennan County.	
Richland; post village in Navarro County.	
Richland; creek, a right-hand tributary to Trinity River.	
Richland; creek, a left-hand branch of San Saba River, tributary to Colorado River.	Brady. San Saba.
Richland; creek, a left-hand tributary to Trinity River	Cleburne.
Richland Springs; city on Richland Creek, in San Saba County	San Saba.
Richmond; county seat of Fort Bend County; population, 993 (1890).	
Ricker; a village on the Gulf, Colorado, and Santa Fe Railway, in Brown County	Brownwood.
Riddleville; post village in Karnes County.	
Ridgeway; post village in Hopkins County.	
Ridings; post village in Fannin County.	
Rienzi; post village in Hill County.	
Riesel; post village in McLennan County.	
Riley; creek, a small left-hand tributary to Sandy Creek, tributary to Colorado River	Llano
Rinard; creek, a small right-hand intermittent branch of Onion Creek, tributary to Colorado River	Austin.
Rincon de la Cruze; small right-hand branch of Canadian River.	
Ringgold; post village in Montague County.	
Riofrio; post village in Bandera County.	

	Atlas sheet.
Rio Grande; a river heading in the San Juan Mountains of Colorado, from which it flows east into San Luis Valley; thence turning south it traverses southern Colorado and all of New Mexico, entering Texas a few miles above El Paso. From this point to its mouth it forms a boundary line between Texas and Mexico. Excepting in the mountains near its source, it traverses an arid region and hence is subject to great variations in volume, being at the low season often dry at the point where it passes El Paso, while at other times it is a roaring torrent. Drainage area is 128,792 square miles; length, 1,770 miles.	Rio Grande. Fort Hancock.
Rio Grande; county seat of Starr County; population, 1,968 (1890).	
Riovista; post village in Johnson County.	
Rip; post village in Montague County.	
Ripley; post village in Titus County.	
Rippy; branch, a left-hand branch of Rock Creek, tributary to Brazos River.	Weatherford. Palto Pinto.
Rising Star; post village in Eastland County	Eastland.
Rising Sun; village in Shackelford County	Anson.
Rita; post village in Burleson County.	
Rivera; village on Southern Pacific Railroad, in El Paso County	El Paso.
Riverland; post village in Clay County.	
Riverside; post village in Walker County.	
Rives; post village in Fisher County.	
Roach; post village in Cass County.	
Roane; post village in Navarro County.	
Roanoke; post village in Denton County; population, 292 (1890).	
Roans Prairie; post village in Grimes County.	
Robert Lee; county seat of Coke County.	
Roberts; a county situated in the Panhandle, with an area of 860 square miles. The population was 620; the county seat, Miami. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 22 inches, and the mean annual temperature 57°. The county is traversed by the Gulf, Colorado and Santa Fe Railway.	
Robertson; creek, a left-hand tributary to Colorado River	Sweetwater.
Robertson; a southeastern county, with an area 913 square miles. The population was 31,480; the county seat, Franklin. The mean magnetic declination in 1900 was 8° 35′. The mean annual rainfall is 45 inches, and the mean annual temperature 67°. The county is traversed by the Houston and Texas Central, the International and Great Northern, the Calvert, Waco and Brazos Valley, and the Hearne and Brazos Valley railroads.	
Robinson; post village in McLennan County	Temple.
Robinson; creek, a right-hand branch of Brazos River	Granbury. Weatherford.
Robinson; peak in Coleman County	Ballinger.
Roby; county seat of Fisher County, situated on Cottonwood Creek, a right-hand tributary to Clear Fork of Brazos River	Roby.
Rochelle; post village in McLennan County	Brady.

	Atlas sheet.
Rock; creek, a right-hand branch of Clear Fork of Trinity River, tributary to West Fork of Trinity River.	Cleburne. Fort Worth.
Rock; creek, a small right-hand intermittent branch of Frio River, tributary to Nueces River	Uvalde.
Rock; creek, a left-hand branch of Brazos River	Palo Pinto. Weatherford.
Rock; creek, a small right-hand branch of Brazos River	Waco. Granbury.
Rockcreek; post village in Parker County.	
Rockdale; city in Milam County; population, 2,515.	
Rockett; post village in Ellis County.	
Rockford; post village in Lamar County.	
Rockhill; post village in Collin County.	
Rockhouse; post village in Austin County.	
Rockisland; post village in Colorado County.	
Rockland; post village in Tyler County; population, 405 (1890).	
Rockport; county seat of Aransas County; population, 1,153.	
Rocksprings; post village in Edwards County; elevation, 2,400 feet	Rock Springs.
Rock Spring School House; village in Runnels County	Hayrick.
Rock Tank; creek, a small left-hand branch of South Fork of Chambers Creek, tributary to Trinity River	Cleburne.
Rockwall; a north central county, with an area of 171 square miles. The population was 8,531; the county seat, Rockwall. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 42 inches, and the mean annual temperature 65°. The county is traversed by the Missouri, Kansas and Texas Railway	Dallas.
Rockwall; county seat of Rockwall County; population, 1,245.	
Rockwood; post village in Coleman County.	
Rocky; branch, a small right-hand intermittent branch of Hackberry Creek, tributary to Brazos River	Waco.
Rocky; creek, a right-hand branch of Lampasas River, tributary to Little River.	Burnet. Georgetown.
Rocky; creek, a right-hand branch of Brazos River	Waco.
Rocky; creek, a small left-hand branch of Resley Creek, tributary to Little River	Hamilton.
Rocky; creek, a left-hand tributary to San Saba River	Fort McKavett.
Rocky; creek, a small left-hand branch of Palo Pinto Creek, tributary to Burnet River	Palo Pinto.
Rocky; creek, a left-hand intermittent branch of Middle Comanche River, tributary to Comanche River	Sherwood.
Rocky; hill in Uvalde County	Uvalde.
Rockybranch; post village in Morris County.	
Rocky Dell; small right-hand branch of Canadian River.	
Roddy; post village in Van Zandt County.	
Roderigo; village in Presidio County	Ruidosa.
Rodgers; post village in Bell County.	
Rodney; post village in Navarro County.	
Roebuck; post village in Camp County.	
Roeder; post village in Titus County.	
Roganville; post village in Jasper County.	

	Atlas sheet.
Rogers; post village in Bell County; population, 664	Taylor.
Rogers Prairie; post village in Leon County.	
Roland; post village in Collin County.	
Rolla; post village in Collingsworth County.	
Rolyat; post village in Bowie County.	
Roma; post village in Starr County.	
Romney; post village in Eastland County.	
Ronda; post village in Wilbarger County.	
Roosevelt; post village in Kimble County.	
Root; post village in Fannin County.	
Rosalie; post village in Red River County.	
Rosanky; post village in Bastrop County.	
Roscoe; post village in Nolan County.	
Rosebud; post village in Falls County.	
Rosedale; post village in Jefferson County.	
Rosehill; post village in Harris County.	
Roseland; post village in Collin County.	
Rosenas; post village in Van Zandt County.	
Rosenberg; post village in Fort Bend County.	
Rosenthal; post village in McLennan County	Temple.
Rosita; post village in San Patricio County.	
Ross; post village in McLennan County.	
Ross; village on the Texas Central Railroad, in Hill County	Waco.
Rosser; post village in Kaufman County.	
Rosston; post village in Cooke County.	
Rossville; post village in Atascosa County; population, 750 (1890).	
Rough; creek, a left-hand branch of East Bosque River, tributary to Bosque River	Granbury.
Rough; creek, a right-hand branch of Jim Ned Creek	Abilene.
Rough; creek, a small right-hand branch of Paluxy Creek, tributary to Brazos River	Granbury.
Rough; creek, a left-hand branch of Colorado River	San Saba.
Rough; creek, a small right-hand branch of North Paluxy Creek, tributary to Brazos River	Stephenville.
Rough Creek; village in Callahan County	Abilene.
Rough; hollow in Kinney County	Brackett.
Rough; hollow in Uvalde County	Brackett
Round; mountain, a hill in San Saba County; elevation, 1,835 feet	Mason.
Round; hill in Shackelford County	Albany.
Round; mountain in Blanco County	Blanco.
Round; mountain in El Paso County	Sierra Blanco.
Round; mountain in Uvalde County	Brackett.
Round; mountain in Eastland County	Eastland.
Round; mountain in Travis County	Austin.
Round; mountain in Comanche County	Brownwood.
Round; mountain in Taylor County	Abilene.
Round Head; mountain in Gillespie County	Fredericksburg.
Round Hole; branch, a small left-hand branch of Bosque River	Stephenville.
Round Mountain; post village in Blanco County.	

	Atlas sheet.
Round Rock; post village on Lake Creek, in Williamson County	Georgetown.
Round Timber; post village in Baylor County.	
Roundtop; post village in Fayette County; population, 238 (1890).	
Rowe; post village in Donley County.	
Rowena; village on the Gulf, Colorado and Santa Fe Railway, in Runnels County	Hayrick.
Rowlett; creek, a right-hand tributary to East Fork of Trinity River	Dallas.
Rowlett; post village in Dallas County.	
Roxton; post village in Lamar County; population, 226 (1890).	
Royal; post village in Shelby County.	
Royse; post village in Rockwall County; population, 503.	
Roznov; post village in Fayette County.	
Ruben; post village in Fannin County.	
Rucker; creek, a left-hand branch of Brazos River	Weatherford. Granbury.
Rucker; post village in Comanche County.	
Rudd; post village in Schleicher County.	
Rufus; post village in Kaufman County.	
Rugby; post village in Red River County.	
Ruidosa; village in Presidio County	Ruidosa.
Ruliff; post village in Newton County.	
Runge; post village in Karnes County.	
Runnels; a central county, with an area of 1,073 square miles. The population was 5,379; the county seat, Ballinger. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 25 inches, and the mean annual temperature 64°. The county is traversed by the Gulf, Colorado and Santa Fe Railway.	Hayrick Sweetwater. Ballinger. Abilene.
Runnels; post village in Runnels County	Ballinger.
Runney; canyon in Jeff Davis County	Fort Davis.
Running Brushy; creek, a head branch of Brushy Creek, tributary to San Gabriel River	Georgetown.
Running Water; post village in Hale County.	
Rural Shade; post village in Navarro County.	
Rush; creek, a right-hand tributary to West Fork of Trinity River	Fort Worth.
Rush; creek, a right-hand branch of Leon River, tributary to Little River.	Eastland. Brownwood.
Rushing; post village in Tarrant County.	
Rusk; county seat of Cherokee County; population, 527.	
Rusk; a northeastern county, with an area of 915 square miles. The population was 26,099; the county seat, Henderson. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 50 inches, and the mean annual temperature 66°. The county is traversed by the International and Great Northern, and the Texas, Sabine Valley and Northwestern railroads.	
Russell; creek, a right-hand branch of Pinto Creek, tributary to the Brazos River.	Eastland. Breckenridge.
Russell; post village in Leon County.	

	Atlas sheet.
Russell; gap in Lampasas County	Lampasas.
Russell Fork of San Gabriel; river, a right-hand branch of North Fork of San Gabriel River	Burnet.
Rutersville; post village in Fayette County.	
Ruth; post village in Coryell County.	
Rutledge; post village in Williamson County	Austin.
Ryan; post village in McLennan County.	
Ryan; village on the Southern Pacific Railroad, in Presidio County	Marfa.
Ryan; flat in Presidio County	Marfa.
Rylie; post village in Dallas County	Dallas.
Sabana; river, a large left-hand branch of Leon River, tributary to Little River	Eastland.
Sabathany; post village in Parker County.	
Sabinal; head branch of Frio River.	
Sabinal; post village in Uvalde County.	
Sabinal; river, a left-hand intermittent tributary to Nueces River	Uvalde.
Sabine; river of eastern Texas and Louisiana. It heads in the former State and flows southeast to latitude 32°, below which point it becomes the boundary line between Texas and Louisiana, flowing in the greater part of its course nearly south. Its lower course flows into and through Sabine Lake, connecting it with the Gulf of Mexico. Drainage area, 20,440 square miles; length, 375 miles.	
Sabine; a southeastern county, with an area of 577 square miles. The population was 6,394; the county seat, Hemphill. The mean magnetic declination in 1900 was 7°. The mean annual rainfall is 54 inches, and the mean annual temperature 68°.	
Sabine; lake near the coast in southeastern Texas, connected with the Gulf by Sabine Pass.	
Sabine; post village in Jefferson County; population, 363.	
Sabine Town; post village in Sabine County.	
Sachse; post village in Dallas County.	
Saddle; creek, a right-hand branch of Salt Creek, tributary to Colorado River	Eden.
Sadler; post village in Grayson County.	
Sadosa; creek, a small tributary to Red River in the Staked Plains.	
Sage; post village in Burnet County.	
Saginaw; post village in Tarrant County.	
St. Croix; river, a small right-hand branch of Canadian River.	
St. Edwards College; village in Travis County	Austin.
St. Elmo; post village in Travis County	Austin.
St. Hedwig; post village in Bexar County.	
St. Jo; post village in Montague County; population, 825.	
St. Mary; post village in Refugio County.	
Salado; a right-hand tributary to Nueces River in southwestern Texas.	
Salado; creek, a right-hand branch of Lampasas River, tributary to Little River	Georgetown.
Salado; post village on Salado Creek, in Bell County	Georgetown.

	Atlas sheet.
Sales; branch, a small left-hand intermittent branch of Concho River	Hayrick.
Salesville; post village in Palo Pinto County.	
Salinas; creek, a left-hand branch of Leon River	Mason.
Salmon; peak in Kinney County; elevation, 1,941 feet	Brackett.
Salona; post village in Montague County.	
Salt; basin in El Paso County	Salt Basin.
Salt; branch, a left-hand branch of Salt Creek, tributary to Colorado River	Eden.
Salt; branch, a small left-hand intermittent branch of Resley Creek, tributary to Leon River.	Stephenville. Hamilton.
Salt; creek, a left-hand branch of Pecan Bayou, tributary to Colorado River	Brownwood.
Salt; creek, a right-hand tributary to Leon River	Mason.
Salt; valley, lying between Sierra Diablo and the Guadalupe mountains in western Texas.	
Salt; creek, a left-hand branch of Colorado River	San Saba. Lampasas.
Salt; fork, a head branch of Brazos River.	
Salt; fork, a left-hand branch of Red River.	
Salt; fork, a right-hand branch of Guadalupe River.	
Salt; gap in Brown County	Brownwood.
Salt; gap in Brady Mountains, in McCulloch County	Eden.
Salt; mountain in Brown County	Brownwood.
Salt Fork Barton; creek, a small left-hand branch of Barton Creek, tributary to Brazos River.	Stephenville. Palo Pinto.
Saltillo; post village in Hopkins County.	
Salt Prong of Hubbard; creek, a left-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Albany.
Salty; post village in Milam County.	
Samuel; post village in Washington County.	
San Angelo; county seat of Green County, situated on Concho River, and on the Gulf, Colorado and Santa Fe Railway; population, 2,615 (1890)	San Angelo.
San Antonio; bay protected by low sand bar, known as Matagorda Island.	
San Antonio; city and county seat of Bexar County; population, 53,321.	
San Antonio; canyon in Chinati Mountains	Ruidosa. Shafter.
San Antonio; river, a large western branch of Guadalupe River.	
San Antonio; river, a stream of southern Texas, flowing from the foot of the Staked Plains into San Antonio Bay.	
San Augustine; a southeastern county, with an area of 570 square miles. The population was 8,434; the county seat, San Augustine. The mean magnetic declination in 1900 was 7° 15′. The mean annual rainfall is 54 inches, and the mean annual temperature 68°.	
San Augustine; county seat of San Augustine County; population, 261.	
San Barnardo; river, a small stream flowing into the Gulf near the mouth of the Brazos River.	
San Bernard; river, a small stream, in southeastern Texas flowing into the Gulf of Mexico.	

	Atlas sheet.
San Carlos; village in Presidio County	San Carlos.
Sanches; creek, a left-hand branch of Brazos River	Weatherford.
Sancita; creek, a right-hand, intermittent branch of Long Draw, tributary to Rio Grande	Marfa.
Sanco; post village in Coke County.	
Sand; creek, a small right-hand branch of Jim Ned Creek, tributary to Pecan Bayou	Coleman.
Sand; creek, a small left-hand, intermittent tributary to Nueces River	Uvalde.
Sand; mountain in Zavalla County; elevation, 868 feet	Uvalde.
Sand; post village in Bastrop County.	
Sanders; creek, a small right-hand branch of Red River in northeastern Texas.	
Sanderson; post village in Pecos County.	
Sandersville; village in Jones County	Anson.
Sandflat; post village in Smith County.	
San Diego; creek, a small tributary to Alacan Bay.	
San Diego; county seat of Duval County; population, 1,877 (1890).	
Sandoval; post village in Williamson County.	
Sandstone; mountain in Llano County; elevation, 1,460 feet	Llano.
Sandusky; post village in Grayson County.	
Sandy; creek, a left-hand branch of Colorado River	Georgetown. Austin.
Sandy; post village on Hickory Creek, in Blanco County	Blanco.
Sandy; branch, a small right-hand branch of Wright Creek, tributary to Llano River	Llano.
Sandy; creek, a right-hand branch of the Sabine River, in eastern Texas.	
Sandy; creek, a right-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River.	Breckenridge. Eastland.
Sandy; creek, a small right-hand intermittent branch of Clear Fork of Brazos River	Roby.
Sandy; creek, a right-hand branch of Big Cedar Creek, tributory to Brazos River	Breckenridge.
Sandy; creek, a small right-hand branch of Colorado River	Llano. Burnet.
Sandy; creek, a right-hand branch of Walnut Creek, tributary to Colorado River	Bastrop.
Sandy; mountain in Llano County; elevation, 1,068 feet	Burnet.
Sandy Mountain; village in Llano County	Burnet.
Sandypoint; post village in Brazoria County.	
San Elizario; post village in El Paso County; elevation, 3,630 feet. Population, 1,397 (1890)	El Paso.
San Felipe; post village in Austin County; population, 241.	
San Fernando; creek, a small stream in southern Texas.	
San Francisco; creek, a tributary to Frio River, in southern Texas.	
San Gabriel; post village in Milam County	Taylor.
Sanger; post village in Denton County.	
San Jacinto; river of southeastern Texas, flowing into Galveston Bay.	

Atlas sheet.

San Jacinto; a southeastern county, with an area of 636 square miles. The population was 10,277; the county seat, Coldspring. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 50 inches, and the mean annual temperature 68°. The county is traversed by the Gulf, Colorado and Santa Fe, and the Houston, East and West Texas railways.

San Jacinto; river of southeastern Texas draining into Galveston Bay.

San Jose; post village in El Paso County.

San Lorenzo; creek, a left-hand branch of the Rio Grande.

San Luis; pass, a gap in the sand bar southwest of Galveston.

San Marcos; county seat of Hays County, population, 2,292.

San Marcos; river, a left-hand branch of Guadalupe River.

San Miguel; branch of Frio River, in southern Texas.

San Miguel; creek, a left-hand tributary to Nueces River, in southern Texas.

San Patricio; a southern county, with an area of 700 square miles. The population was 2,372; the county seat, Sinton. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 35 inches, and the mean annual temperature 72°. The county is traversed by the San Antonio and Aransas Pass, the Southern Pacific, the San Antonio and Gulf, and the International and Great Northern railroads.

San Patricio; post village in San Patricio County; population, 315 (1890).

San Pedro; post village in Houston County.

San Raices; creek, a right-hand tributary to Nueces River, in southwestern Texas.

Sanramon; post village in Hidalgo County.

San Roque; creek, a right-hand tributary to Nueces River, in southwestern Texas.

San Saba; county seat of San Saba County; population, 697 (1890) .... San Saba.

San Saba; peak in Mills County; elevation, 1,712 feet.......... San Saba.

San Saba; river, a large right-hand branch of Colorado River, heading in Schleicher County and flowing a little north of east to its mouth; length, 120 miles. { Mason. Brady. San Saba.

San Saba; a central county, with an area of 1,150 square miles. The population was 7,569; the county seat, San Saba. The mean magnetic declination in 1900 was 9° 55′. The mean annual rainfall is 30 inches, and the mean annual temperature 66°. { Mason. Burnet. Lampasas. Brady. San Saba. Llano.

Sansom; post village in Uvalde County, on the Southern Pacific Railroad .... Uvalde.

Santa Anna; post village on the Gulf, Colorado and Santa Fe Railway, at foot of Santa Anna Mountains, in Coleman County; population, 468 (1890) .... Coleman.

Santa Anna; branch, a small left-hand intermittent branch of Home Creek, tributary to Colorado River.

Santa Gertrudes; creek, a small stream in southern Texas flowing into Alacan Bay.

	Atlas sheet.
Santa Isabella; creek, a left-hand branch of Rio Grande.	
Santa Lucia; post village in Pecos County.	
Santa Maria; post village in Cameron County.	
Santa Monica; village on Colorado River	Austin.
Santa Rosa; village on the Southern Pacific Railroad, in El Paso County	El Paso.
Santiago; village in Presidio County	Polvo.
Santiago; mountain range of western Texas.	
Santo; post village on the Texas and Pacific Railway, in Palo Pinto County	Palo Pinto.
San Ygnacio; post village in Zapata County.	
Saralvo; post village in Ellis County.	
Saratoga; post village in Hardin County.	
Sardis; post village in Cass County.	
Saron; post village in Trinity County.	
Sartartia; post village in Fort Bend County.	
Sash; post village in Fannin County.	
Sattler; post village in Comal County.	
Sauz; post village in Cameron County.	
Sava; post village in Van Zandt County.	
Savage; post village in Fannin County.	
Savoy; post village in Fannin County; population, 343.	
Sawtooth; mountain in Jeff Davis County; elevation, 7,748 feet.	Valentine.
Sawyer; branch, a small left-hand intermittent branch of Resley Creek, tributary to Leon River	Stephenville.
Sawyer; post village in Irion County.	
Saxie; village on the Gulf, Colorado and Santa Fe Railway, in Dallas County	Dallas.
Sayers; post village in Bexar County.	
Sayersville; post village in Bastrop County.	
Schep; creek, a right-hand branch of Llano River	Mason.
Schertz; post village in Guadalupe County.	
Schiller; post village in Kendall County.	
Schleicher; a southwestern county, with an area of 1,355 square miles. The population was 515. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 20 inches, and the mean annual temperature 64°.	San Angelo. Sherwood. Fort McKavett.
Schley; post village in Harrison County.	
Schoeman; post village in Austin County.	
School; post village in Guadalupe County.	
School; creek, a right-hand branch of Lampasas River, tributary to Little River	Lampasas.
School House; village in Uvalde County	Uvalde.
Schulenburg; post village in Fayette County; population, 1,149.	
Science Hall; village in Hess County	Austin.
Scott; branch; a small right-hand branch of Pedernales River	Kerrville.
Scott; post village in Van Zandt County.	
Scottsville; post village in Harrison County.	
Scranton; post village in Eastland County.	
Scroggins; post village in Franklin County.	
Scrugan; branch, a small right-hand branch of West Fork of Trinity River	Fort Worth.

	Atlas sheet.
Scurry; a northwestern county, with an area of 821 square miles. The population was 4,158; the county seat, Snyder. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 20 inches, and the mean annual temperature 62°.	
Scurry; post village in Kaufman County.	
Scyene; village in Dallas County	Dallas.
Seabrook; post village in Harris County.	
Seadrift; post village in Calhoun County.	
Seagoville; post village on the Texas Trunk Railroad, in Dallas County	Dallas.
Seale; post village in Robertson County.	
Sealy; post village in Austin County; population, 837 (1890).	
Searcy; post village in Madison County.	
Seaton; post village in Bell County.	
Seattle; post village in Coryell County.	
Seawillow; post village in Caldwell County.	
Sebesta; post village in Burleson County.	
Sebree; post village in Jack County.	
Seclusion; post village in Lavaca County.	
Seco; creek, a head branch of Frio River.	
Sedalia; post village in Collin County.	
Sedan; post village in Gonzales County.	
Seep Springs; mountain in Edwards County; elevation, 2,280 feet	Nueces.
Seglar; post village in Bexar County.	
Segovia; post village in Kimble County.	
Seguin; county seat of Guadalupe County; population, 2,421.	
Selden; post village on Sims Creek, in Erath County	Stephenville.
Selfs; post village in Fannin County.	
Selma; post village in Bexar County.	
Seminole Settlement; village in Kinney County	Brackett.
Sempronius; post village in Austin County.	
Senior; post village in Bexar County.	
Senterfitt; village on Salt Creek, in Lampasas County.	
Serbin; post village in Lee County.	
Seven; knobs, hills in Somervell and Bosque counties	Granbury.
Sevenoaks; post village in Polk County.	
Sexton; post village in Sabine County.	
Seymour; county seat of Baylor County; population, 1,125 (1890).	
Shackelford; a north central county, with an area of 926 square miles. The population was 2,461; the county seat, Albany. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 28 inches, and the mean annual temperature 64°. The county is traversed by the Texas Central Railroad.	Albany. Anson.
Shadeland; post village in Lipscomb County.	
Shady; creek, a small right-hand branch of Canadian River.	
Shadygrove; post village in Upshur County.	
Shaeffer; post village in Duval County.	
Shafter; post village on Cibolo Creek, in Presidio County	Shafter.
Shamrock; post village in Wheeler County.	

	Atlas sheet.
Shanks; post village in Freestone County.	
Shannon; post village in Clay County.	
Sharp; mountain, a hill in Llano County; elevation, 1,633 feet.	Llano.
Sharp; post village in Milam County.	
Sharpsburg; post village in San Patricio County; population, 371 (1890).	
Shavano; post village in Bexar County.	
Shaw; post village in Fannin County.	
Shawnee; creek, a left-hand branch of Angelina River.	
Shaws; creek, a small left-hand branch of Colorado River	San Saba.
Sheep Ranch Hollow; right-hand branch of Sabana River	Eastland.
Sheffield; post village in Pecos County.	
Shelby; a southeastern county, with an area of 814 square miles. The population was 20,452; the county seat, Center. The mean magnetic declination in 1900 was 7° 05′. The mean annual rainfall is 52 inches, and the mean annual temperature 67°. The county is traversed by the Houston, East and West Texas Railway.	
Shelby; post village in Austin County.	
Shelbyville; post village in Shelby County.	
Sheldon; post village in Harris County.	
Shelving; rock, a hill in Erath County	Stephenville.
Shepherd; post village in San Jacinto County.	
Shepton; post village in Collin County.	
Sheridan; post village in Houston County.	
Sherley; post village in Hopkins County.	
Sherman; county seat of Grayson County; population, 10,243.	
Sherman; a county situated in the Panhandle, with an area of 850 square miles. The population was 104; the county seat, Coldwater. The mean magnetic declination in 1900 was 11° 30′. The mean annual rainfall is 18 inches, and the mean annual temperature 57°.	
Sherwood; county seat of Irion County; population, 264 (1890).	
Shiloh; post village in Denton County.	
Shimek; post village in Colorado County.	
Shiner; post village in Lavaca County; population, 845.	
Shingle; hills in Travis County	Blanco.
Shinnery; post village in Collingsworth County.	
Shinoak; branch, a small left-hand branch of Sabana River, tributary to Little River	Eastland.
Shirley, branch, a small left-hand branch of Clear Fork of Brazos River	Albany.
Shive; post village in Hamilton County	Hamilton.
Shoal; creek, a left-hand branch of Colorado River	Austin.
Shoe Peg; mountain in Uvalde County; elevation, 1,741 feet	Nueces.
Short; post village in Shelby County.	
Short; canyon in Jeff Davis County	Fort Davis.
Shovel; mountain in Blanco County	Blanco.
Shovelmount; post village in Burnet County.	
Shovel Mountain; village on Double Horn Creek, in Burnet County	Blanco.
Sidney; post village on Little Jimmys Creek, in Comanche County	Brownwood.

	Atlas sheet.
Sierra Blanca; post village in El Paso County, at junction of the Galveston, Harrisburg and San Antonio, and the Texas and Pacific railways; elevation, 4,512 feet	Sierra Blanca.
Sierra Blanca; mountains in El Paso County	Sierra Blanca.
Sierra Blanca; mountain group in western Texas, crossed by the Southern Pacific Railroad.	
Sierra Diablo; range of mountains in El Paso County	Salt Basin.
Sierra Prieta; mountains in El Paso County	Salt Basin.
Sierra Tinaja Pinta; range of mountain in El Paso County	Salt Basin.
Sierra Vieja; short range of mountains in western Texas, bordering the Rio Grande.	
Sikes; post village in Hunt County.	
Silas; post village in Shelby County.	
Siloam; post village in Bowie County.	
Silsbee; post village in Hardin County.	
Silver; post village in Coke County.	
Silver; creek, a right-hand branch of West Fork of Trinity River.	Weatherford. Fort Worth.
Silver; creek, a small left-hand tributary to Sandy Creek, tributary to Colorado River	Llano.
Silver; lake in West Nueces River, in Kinney County	Nueces.
Silverlake; county seat of Van Zandt County.	
Silver Mine; creek, a small intermittent head branch of Sandy Creek, tributary to Colorado River	Llano.
Silver Mine; village in Uvalde County	Uvalde.
Silverton; county seat of Briscoe County.	
Silver Valley; post village in Coleman County.	
Simms; post village in Bowie County.	
Simms; creek, a right-hand branch of Lampasas River, tributary to Little River	Lampasas.
Simonds; post village on the Texas Trunk Railroad, in Dallas County	Dallas.
Simonton; post village in Fort Bend County.	
Simpson; creek, a right-hand branch of San Saba River, tributary to Colorado River	San Saba.
Simpsonville; post village in Upshur County.	
Sims; creek, a small left-hand branch of Bosque River	Stephenville.
Singleton; post village in Grimes County.	
Sinton; county seat of San Patricio County.	
Sion; post village in Walker County.	
Sipe Springs; post village on Sipe Springs Branch, in Comanche County	Eastland.
Sipe Springs; branch, a small left-hand branch of Copperas Creek, tributary to Little River.	
Sisterdale; post village in Kendall County.	
Sivellsbend; post village in Cooke County.	
Six Mile; creek, a right-hand branch of Llano River, tributary to Colorado River	Llano
Six Shooter; small left-hand intermittent branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Breckenridge.
Skeen; peak in Wise County	Weatherford.
Skidmore; post village in Bee County.	
Skinout; creek, a right-hand intermittent branch of California Creek, tributary to Clear Fork of Brazos River.	Roby. Anson.

	Atlas sheet.
Skinout; mountain in Jones County	Roby.
Skippers Gap; post village in Erath County	Granbury.
Slaughter; creek, a left-hand branch of Onion Creek, tributary to Colorado River	Austin.
Slayden; post village in Gonzales County.	
Slick Rock; creek, a right-hand branch of Colorado River	Blanco. Burnet.
Slidell; post village in Wise County.	
Sloan; post village in San Saba County.	
Slocum; post village in Anderson County.	
Small; post village in Van Zandt County.	
Smetana; post village in Brazos County.	
Smiley; post village in Gonzales County.	
Smith; post village in Upshur County.	
Smith; a northeastern county, with an area of 984 square miles. The population was 37,370; the county seat, Tyler. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 48 inches, and the mean annual temperature 65°. The county is traversed by the Missouri, Kansas and Texas, the St. Louis Southwestern, and the International and Great Northern railroads.	
Smith; gap in mountains in Erath County	Stephenville.
Smith Ferry; post village in Tyler County.	
Smithfield; post village on the St. Louis Southwestern Railway, in Tarrant County	Forth Worth.
Smithland; post village in Marion County.	
Smithpoint; post village in Chambers County.	
Smithsons Valley; post village in Comal County.	
Smithville; post village in Bastrop County; population, 2,577.	
Smithwick; post village on Colorado River, in Burnet County	Burnet.
Smoothingiron; mountains in Llano County; elevation, 1,833 feet	Llano.
Snailum; creek, a left-hand branch of Hubbard Creek, tributary to Clear Fork of Brazos River	Albany.
Snake; creek, a small left-hand branch of Aquilla Creek, tributary to Brazos River	Waco.
Snook; post village in Burleson County.	
Snow; post village in Leon County.	
Snyder; county seat of Scurry County; population, 500 (1890).	
Soap; creek, a right-hand branch of Mountain Creek, tributary to West Fork of Trinity River.	Cleburne. Fort Worth.
Socagie; creek, a left-hand branch of Sabine River, in eastern Texas.	
Socorro; post village in El Paso County	El Paso.
Soda; post village in Polk County.	
Sodom; post village in Hunt County.	
Sol; creek, a small right-hand tributary to San Saba River	Mason.
Solms; post village in Comal County.	
Somerset; post village in Atascosa County.	
Somervell; a north central county, with an area of 200 square miles. The population was 3,498; the county seat, Glenrose. The mean magnetic declination in 1900 was 9°. The mean annual rainfall is 40 inches, and the mean annual temperature 65°	Granbury.

	Atlas sheet.
Somerville; post village in Burleson County.	
Sonora; county seat of Sutton County.	
Sour; creek, a left-hand branch of the Rio Grande.	
Sourlake; post village in Hardin County.	
South Bear; creek, a right-hand branch of Bear Creek, tributary to Clear Fork of Trinity River	Weatherford.
Southbend; post village in Young County.	
South Bosque; post village on South Bosque River, in McLennan County	Temple.
South Bosque; river, a right-hand branch of Bosque River	Stephenville.
South Brady; creek, a right-hand branch of Brady Creek, tributary to San Saba River	Eden.
South Concho; draw, a valley in Schleicher County	Fort McKavett. San Angelo.
South Copperas; creek, a right-hand branch of Copperas Creek, tributary to Little River	Eastland.
South Fork of San Gabriel; river, a head branch of San Gabriel River.	Burnet. Georgetown.
South Franklin; peak of Franklin Mountains; elevation, 5,591 feet	El Paso.
South Grape; creek, a right-hand branch of Pedernales River	Fredericksburg.
South Jim Ned; creek, a right-hand branch of Jim Ned Creek, tributary to Pecan Bayou	Ballinger.
South Leon; creek, a right-hand branch of Leon River, tributary to Little River.	Brownwood. Hamilton.
South Llano; river, a head branch of Leon River	Rock Springs.
Southmayd; post village in Grayson County.	
South Mesquite; creek, a small right-hand branch of East Fork of Trinity River	Dallas.
South Palo Pinto; creek, a head branch of Palo Pinto Creek, tributary to Brazos River	Eastland.
South Prairie; post village in Stephens County	Breckenridge.
South Rocky; creek, a head branch of Rock Creek, tributary to Little River.	Burnet. Georgetown.
South Sulphur; post village in Hunt County.	
Sowers; post village in Dallas County	Dallas.
Spanish Camp; post village in Wharton County.	
Spanish Fort; post village in Montague County; population, 247.	
Spare Ribs; creek, a left-hand branch of Colorado River	Burnet.
Sparks; post village on Cedar Creek and on the Gulf, Colorado and Santa Fe Railway, in Bell County	Dallas.
Sparta; post village in Bell County.	
Speck; mountain in Coleman County	Coleman.
Speegleville; post village in McLennan County	Waco.
Speer; post village in Wood County.	
Spencer; creek, a left-hand branch of Rio Grande	Ruidosa. Shafter.
Spicewood Springs; village on San Antonio Division of the International and Great Northern Railroad, in Burnet County	Austin.
Spillen; creek, a left-hand branch of Red River, in the Panhandle.	
Spivey; post village in Shelby County.	
Splendora; post village in Montgomery County.	

	Atlas sheet.
Spofford; post village on the Southern Pacific Railroad, in Kinney County; elevation, 1,015 feet	Brackett.
Sport; post village in Aransas County.	
Spring; post village in Harris County.	
Spring; creek, a right-hand tributary to East Fork of Trinity River	Dallas.
Spring; creek, a small right-hand branch of Johnson Creek, tributary to Guadalupe River	Kerrville.
Spring; creek, a right-hand branch of Deadman Creek, tributary to Clear Fork of Brazos River	Anson.
Spring; creek, a right-hand branch of California Creek, tributary to Clear Fork of Brazos River	Anson.
Spring; creek, a right-hand tributary to Concho River	Sherwood.
Spring; creek, a small left-hand branch of Colorado River	Burnet.
Spring; creek, a small left hand branch of Pedernales River	Kerrville.
Spring; creek, a small right-hand branch of Colorado River	San Saba.
Spring; creek, a right-hand tributary to Llano River	Mason.
Spring; creek, a right-hand branch of Bosque River	Stephenville. Hamilton.
Spring; creek, a small left-hand branch of North Grape Creek, tributary to Pedernales River	Blanco.
Spring; creek, a left hand branch of Meridian Creek, tributary to Bosque River	Meridian.
Spring; creek, a left-hand branch of Brazos River, in Parker County	Weatherford.
Spring; creek, a right-hand tributary to Nueces River	Nueces.
Spring; creek, a tributary to San Jacinto River.	
Spring; small right-hand branch of Canadian River.	
Springbranch; post village in Comal County.	
Spring Creek; gap in Bosque County	Meridian.
Springcreek; post village in Throckmorton County.	
Springdale; post village in Cass County.	
Springhill; post village in Navarro County.	
Springtown; post village in Parker County; population, 518	Weatherford.
Sprinkle; post village in Travis County	Austin.
Spur; creek, a small right-hand intermittent branch of Colorado River	Ballinger.
Spurger; post village in Tyler County.	
Spy; mountain in Stephens County	Breckenridge.
Squaw; creek, a small left-hand branch of Clear Fork of Trinity River	Weatherford.
Squaw; creek, a right-hand branch of Brazos River	Granbury.
Squaw; creek, a right-hand branch of Threadgill Creek, tributary to Llano River.	Kerrville. Mason.
Stacy; post village in McCulloch County.	
Staff; post village in Eastland County.	
Stafford; post village in Fort Bend County.	
Stag; branch, a small right-hand intermittent branch of Colorado River	Ballinger.
Stage Stand; village on Perdiz Creek, in Presidio County	Marfa.
Stamford; post village in Jones County.	
Stamp; post village in Falls County.	
Stampede; post village in Bell County.	

	Atlas sheet.
Stampede; creek, a small left-hand branch of Leon River, tributary to Little River	Temple.
Standart; post village in Kinney County.	
Stanton; county seat of Martin County.	
Staples; post village in Guadalupe County.	
Star; post village in Mills County.	
Star; mountain in Hamilton County	Lampasas.
Star; mountain in Brown County	Brownwood.
Star; mountain in Jeff Davis County; elevation, 6,350 feet	Fort Davis.
Star; village in Hamilton County	Lampasas.
Star Hollow; creek, a small right-hand branch of Robinson Creek, tributary to Brazos River.	Granbury. Weatherford.
Starkey; post village in Floyd County.	
Starr; a county in southern Texas, with an area of 2,510 square miles. The population was 11,469; the county seat, Rio Grande. The mean magnetic declination in 1900 was 7° 55′. The mean annual rainfall is 30 inches, and the mean annual temperature 75°.	
Starrville; post village in Smith County.	
Station; branch, a small left-hand branch of Fall Creek, tributary to Brazos River	Granbury.
Station; creek, a small left-hand branch of Leon River, tributary to Little River	Temple.
Steal Easy; mountain in Stephens County	Breckenridge.
Steamboat; mountain in Taylor County	Abilene.
Steamboat; mountain in Kimble County; elevation, 2,000 feet	Kerrville.
Steedman; post village in Grayson County.	
Steel; creek, a right-hand branch of Navasota River.	
Steele; creek, a right-hand branch of Brazos River	Granbury.
Steeles Store; post village in Brazos County.	
Stellar; post village in Fayette County.	
Stephens; a north central county, with an area of 926 square miles. The population was 6,466; the county seat, Breckenridge. The mean magnetic declination in 1900 was 9° 15′. The mean annual rainfall is 30 inches, and the mean annual temperature 64°. The county is traversed by the Texas and Pacific Railway	Breckenridge. Albany.
Stephenville; post village in Erath County; population, 1,902	Stephenville.
Steppe; creek, a left-hand branch of Pecan Bayou, tributary to Colorado River	Brownwood.
Sterling; a southwestern county, with an area of 821 square miles. The population was 1,127; the county seat, Sterling. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 20 inches, and the mean annual temperature 61°.	
Sterling; county seat of Sterling County.	
Sterrett; post village in Ellis County.	
Stevens; post village in Rusk County.	
Stewards Mill; post village in Freestone County.	
Stewart; post village in Rusk County.	
Stewart Ford; village on Colorado River	Austin.
Stiles; post village in Tom Green County.	
Stilson; post village in Liberty County.	

	Atlas sheet.
Stink; creek, a small right-hand tributary to Brazos River	Sweetwater. Roby.
Stockard; post village in Henderson County.	
Stockdale; post village in Wilson County.	
Stockman; post village in Shelby County.	
Stock Yards; station at Fort Worth.	
Stoker; post village in Nacogdoches County.	
Stone; post village in Washington County.	
Stone Bridge; creek, a left-hand tributary to Llano River	Mason.
Stoneburg; post village in Montague County.	
Stone City; post village in Brazos County.	
Stoneham; post village in Grimes County.	
Stonepoint; post village in Van Zandt County.	
Stones Mill; post village in Panola County.	
Stonewall; a northwestern county, with an area of 777 square miles. The population was 2,183; the county seat, Rayner. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 25 inches, and the mean annual temperature 62°.	Anson. Roby.
Stonewall; village on Pedernales River, in Gillespie County	Fredericksburg.
Stony; post village in Denton County.	
Stormville; post village in Wood County.	
Storrs; post village in Limestone County.	
Stout; post village in Wood County.	
Stowell; post village in Chambers County.	
Straight; creek, a small right-hand branch of North Paluxy Creek, tributary to Brazos River	Stephenville.
Stranger; post village in Falls County.	
Stratton; post village in Dewitt County.	
Strawn; post village on the Texas and Pacific Railway, in Palo Pinto County; population, 514 (1890)	Palo Pinto.
Straws Mill; post village in Coryell County.	
Streeter; post village in Mason County.	
Stricklin; creek, a left-hand intermittent branch of Chacon Creek, tributary to Nueces River	Brackett.
Strickling; village on North Fork of San Gabriel River	Burnet.
Striker; creek, a left-hand branch of Angelina River.	
String Prairie; post village in Bastrop County.	
Strobel; post village in Hamilton County.	
Strouds; creek, a right-hand branch of Brazos River	Granbury.
Stryker; post village in Polk County.	
Stubblefield; post village in Johnson County	Cleburne.
Stubbs; post village in Kaufman County.	
Stuebner; post village in Harris County.	
Styx; post village in Kaufman County.	
Sublett; post village in Tarrant County.	
Sublime; post village in Lavaca County.	
Sue; post village in Atascosa County.	
Sugarhill; post village in Panola County.	
Sugarland; post village in Fort Bend County.	
Sugar Loaf; a mountain on Gary Creek, in Bosque County	Meridian.
Sullivan; post village in Guadalupe County.	
Sulphur; a mountain in Uvalde County; elevation, 1,124 feet	Uvalde.

	Atlas sheet.
Sulphur; fork, a right-hand branch of Red River, in northeastern Texas and in Louisiana.	
Sulphur; creek, a left-hand branch of Nueces River.	
Sulphur; creek, a right-hand branch of Lampasas River, tributary to Little River	Lampasas.
Sulphur; branch, a small left-hand tributary to West Fork of Trinity River	Fort Worth.
Sulphur Bluff; post village in Hopkins County.	
Sulphur Springs; county seat of Hopkins County; population, 3,635.	
Summerfield; post village in Cherokee County.	
Summers Mills; post village in Bell County.	
Sumner; post village in Lamar County.	
Sunbeam; post village in Grayson County.	
Sunny Lane; post village on South Rocky Creek, in Burnet County	Burnet.
Sunnyside; post village in Waller County.	
Sunset; post village in Montague County; population, 375 (1890).	
Sunview; post village in Marion County.	
Sutherland Springs; post village in Wilson County.	
Sutton; a southwestern county, with an area of 1,517 square miles. The population was 1,727; the county seat, Sonora. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 20 inches, and the mean annual temperature 64°.	Fort McKavett. Rock Springs.
Swager; creek, a right-hand branch of Clear Fork of Brazos River.	Anson. Albany.
Swan; post village in Smith County.	
Swannville; post village in San Augustine County.	
Swanson; post village in Falls County.	
Swedonia; post village in Fisher County; elevation, 1,810 feet	Roby.
Sweet Briar; head branch of North Fork of Red River, in the Panhandle.	
Sweet Home; post village in Lavaca County.	
Sweetwater; county seat of Nolan County, situated on the Texas and Pacific Railway; population, 670	Sweetwater.
Sweetwater; creek, a right-hand branch of Copperas Creek, tributary to Little River	Brownwood.
Sweetwater; creek, a right-hand branch of Clear Fork of Brazos River.	Sweetwater. Roby.
Swift, post village in Nacogdoches County.	
Swisher; a county situated in the Panhandle, with an area of 850 square miles. The population was 1,227; the county seat, Tulia. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 20 inches, and the mean annual temperature 58°.	
Swiss Alp; post village in Fayette County.	
Sycamore; post village in Wise County.	
Sycamore; creek, a left-hand branch of East Nueces River, tributary to Nueces River	Uvalde.
Sycamore; creek, a right-hand branch of Richardson Creek, tributary to Brazos River.	Stephenville. Granbury.

	Atlas sheet.
Sycamore; creek, a left-hand, intermittent branch of Leon River, tributary to Little River.	Hamilton. Meridian.
Sycamore; creek, a right-hand branch of West Fork of Trinity River	Fort Worth.
Sycamore; creek, a small left-hand branch of Colorado River.	Burnet.
Sycamore; creek, a small left-hand branch of the Rio Grande.	
Sylvan; post village in Lamar County.	
Syringa; post village in Upshur County.	
Syster; creek, a left-hand branch of Guadalupe River	Fredericksburg.
Tabernacle; mountain in El Paso County	Sierra Blanca.
Table; gap in Runnels County	Abilene.
Table; mountain in Runnels County	Abilene.
Tabor; post village in Brazos County.	
Tadmor; post village in Houston County.	
Tage; post village in Montague County.	
Taiton; post village in Wharton County.	
Tallow Face; mountain in Eastland County	Stephenville.
Talmage; post village in Wilbarger County.	
Talpa; post village on the Gulf, Colorado and Santa Fe Railway, in Coleman County	Ballinger.
Talty; post village in Kaufman County.	
Tamina; post village in Montgomery County.	
Tanglewood; post village in Lee County.	
Tanks; post village in Cottle County.	
Tanner; post village in Eastland County.	
Tanyard; branch, a small left-hand branch of Leon River, tributary to Little River	Temple.
Taopi; post village in Fisher County; elevation, 1,925 feet	Roby.
Tap; post village in Dickens County.	
Tapado; canyon in Presidio County	Polvo.
Tarpley; post village in Bandera County.	
Tarpon; post village in Nueces County.	
Tarrant; a north central county, with an area of 900 square miles. The population was 52,376; the county seat, Fort Worth. The mean magnetic declination in 1900 was 8° 25′. The mean annual rainfall is 40 inches, and the mean annual temperature 65°. The county is traversed by the Gulf, Colorado and Santa Fe, the Fort Worth and Rio Grande, the Fort Worth and New Orleans, the Fort Worth and Denver City, the Chicago, Rock Island and Texas, the St. Louis Southwestern, the Texas and Pacific, and the Missouri, Kansas and Texas railroads.	Fort Worth. Weatherford.
Tascosa; county seat of Oldham County.	
Tatum; post village in Rusk County.	
Taylor; a north central county, with an area of 900 square miles. The population was 10,499; the county seat, Abilene. The mean magnetic declination in 1900 was 9° 45′. The mean annual rainfall is 25 inches, and the mean annual temperature 64°. The county is traversed by the Texas and Pacific Railway.	Anson. Roby. Sweetwater. Abilene.
Taylor; creek, a right-hand branch of Foyle Creek, tributary to Clear Fork of Brazos River	Albany.

	Atlas sheet.
Taylor; hills in Uvalde County	Uvalde.
Taylor; city at junction of the Missouri, Pacific and International and the Great Northern railroads, in Williamson County; population, 4,211	Taylor.
Taylors Bayou; post village in Jefferson County.	
Taylorsville; post village in Caldwell County.	
Tazewell; post village in Hopkins County.	
Tebo; post village in Sabine County.	
Teck; post village in Travis County.	
Tecumseh; post village in Callahan County	Abilene.
Tecumseh; peak in Callahan County	Abilene.
Teddy; post village in San Jacinto County.	
Tehuacan; creek, a left-hand branch of Brazos River	Waco.
Tehuacana; post village in Limestone County; population, 382.	
Tehuasana; creek, a right-hand branch of Trinity River.	
Telephone; post village in Fannin County.	
Telico; post village in Ellis County.	
Temple; city on the Gulf, Colorado and Santa Fe, and the Missouri, Kansas and Texas railways, in Bell County; population, 7,065	Temple.
Tenaha; post village in Shelby County.	
Teneha; creek, a right-hand branch of the Sabine River, in the eastern part of Texas.	
Tenmile; post village in Madison County.	
Ten Mile; creek, a right-hand branch of Trinity River	Dallas.
Ten Mile; creek, a small left-hand intermittent branch of Concho River	Hayrick.
Ten Mile; draw, a shallow valley in Sutton County	Rock Springs.
Tennessee Colony; post village in Anderson County.	
Tennyson; post village in Coke County.	
Ternera; creek, a small left-hand branch of the Rio Grande in Presidio County.	
Terlingua; post village in Brewster County.	
Terrell; city in Kaufman County; population, 6,330.	
Terrett; draw, a shallow valley in Schleicher County	Fort McKavett.
Terry; post village in Orange County.	
Terry; a northwestern county, with an area of 828 square miles. The population was 48. The mean magnetic declination in 1900 was 11°. The mean annual rainfall is 17 inches, and the mean annual temperature 58°.	
Terryville; post village in Dewitt County.	
Tesla; post village in Houston County.	
Texarkana; city of Bowie County, situated on the State line; the county seat of Miller County, Ark. The population was 5,256.	
Texas; post village in Galveston County.	
Texas Hill; triangulation station in Bastrop County	Austin.
Texline; county seat of Dallam County.	
Thalia; post village in Foard County.	
Tharp; village in Montgomery County; population, 214 (1890).	
The Grove; post village in Coryell County.	
Thelma; post village in Limestone County.	

	Atlas sheet.
Theny; post village in Comanche County.	
Theo; post village in Falls County.	
Theodore; post village in Grayson County.	
Theta; post village in Hunt County.	
Thomanton; post village in Dewitt County; population, 494 (1890).	
Thompson; branch, a right-hand branch of California Creek, tributary to Clear Fork of Brazos River	Anson.
Thompson; branch, a small right-hand branch of Willow Creek, tributary to West Fork of Trinity River	Weatherford.
Thompsons; post village in Fort Bend County.	
Thornberry; post village in Clay County.	
Thorndale; post village in Milam County.	
Thorndale; village on the International and Great Northern Railroad, in Williamson County	Taylor.
Thornton; post village in Limestone County; population, 466 (1890).	
Thorp Spring; post village in Hood County; population, 485 (1890)	Granbury.
Threadgill; creek, a right-hand branch of Llano River	Kerrville. Mason.
Threemile; creek, a small left-hand intermittent branch of West Nueces River, tributary to Nueces River	Nueces.
Thrifty; post village on Sand Creek, in Brown County	Coleman.
Throckmorton; county seat of Throckmorton County; population, 240 (1890).	
Throckmorton; a north central county, with an area of 821 square miles. The population was 1,750; the county seat, Throckmorton. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 28 inches, and the mean annual temperature 63°	Albany.
Thurber; post village in Erath County; population, 978 (1890).	
Tib; post village in Collin County.	
Tibble; post village in Polk County.	
Tidwell; post village in Hunt County.	
Tierra Vieja; mountains in Jeff Davis and Presidio counties	Chispa. San Carlos.
Tiger; creek, a right-hand branch of San Saba River, tributary to Colorado River.	Mason. Brady.
Tiger; creek, a small right-hand branch of Colorado River	Burnet.
Tiger Mill; post village on Tiger Creek, in Burnet County.	Burnet.
Tilden; county seat of McMullen County; population, 506 (1890).	
Tilmon; post village in Caldwell County.	
Timber; mountain in Jeff Davis County; elevation, 6,442 feet	Fort Davis.
Time; post village in Sabine County.	
Timpson; post village in Shelby County; population, 518 (1890).	
Tinaya; creek, a left-hand branch of Rio Grande, in Pecos County.	
Tiocana; post village in Cameron County.	
Tioga; post village in Grayson County.	
Tiptop; post village in Polk County.	
Tira; post village in Hopkins County.	
Tittle; post village in Hill County.	

	Atlas sheet.
Titus; a northeastern county, with an area of 421 square miles. The population was 12,292; the county seat, Mount Pleasant. The mean magnetic declination in 1900 was 7° 15′. The mean annual rainfall is 48 inches, and the mean annual temperature 64°. The county is traversed by the St. Louis Southwestern Railway.	
Titus; post village in Titus County.	
Tivoli; post village in Refugio County.	
Tobey; post village in Atascosa County.	
Tod; mountain, a hill in Mason County; elevation, 1,695 feet	Mason.
Todd; post village in Milam County.	
Tolar; post village in Hood County.	
Tolbert; post village in Wilbarger County.	
Toledo; post village in Newton County.	
Toliver; post village in Nacogdoches County.	
Tollette; post village in Lamar County.	
Tolosa; post village in Kaufman County.	
Tom Bean; post village in Grayson County; population, 299.	
Tom Green; a southwestern county, with an area of 2,553 square miles. The population was 6,804; county seat, San Angelo. The mean magnetic declination in 1900 was 10°. The mean annual rainfall is 20 inches, and the mean annual temperature 63°. The county is traversed by the Gulf, Colorado and Santa Fe Railway.	Hayrick. San Angelo. Sherwood.
Tom Nunn; hill in Uvalde County	Uvalde.
Tom Spring; branch, a small right-hand intermittent branch of Little Duffau Creek, tributary to Bosque River	Stephenville.
Tona; post village in Kaufman County.	
Tonk; creek, a right-hand tributary to Bosque River	Waco.
Toomey; post village in Shelby County.	
Topaz; post village in Erath County.	
Torbert; village on the Galveston, Harrisburg and San Antonio Railway, in El Paso County; elevation, 4,343 feet	Sierra Blanca.
Torneros; creek, a left-hand intermittent tributary to the Rio Grande River	Shafter.
Tornillo; creek, a small left-hand branch of the Rio Grande in Brewster County.	
Toto; post village in Parker County.	
Tours; post village in McLennan County.	
Tow; post village in Llano County.	
Tow; valley on Colorado River, in Llano County	Burnet.
Towash; creek, a small left-hand branch of Brazos River	Waco.
Town; creek, a left-hand branch of Guadalupe River	Kerrville.
Town; mountain in Llano County; elevation, 1,285 feet	Llano.
Townbluff; post village in Tyler County.	
Townsen Mills; village in Lampasas County	Lampasas.
Townsville; post village in Williamson County.	
Towson; post village in Red River County.	
Tow Valley; village in Tow Valley, Llano County	Burnet.
Toyah; creek, a right-hand branch of Pecos River.	
Toyah; creek, a stream tributary in high water to the Pecos River	Fort Davis.
Toyah; post village in Reeves County.	

	Atlas sheet.
Toyahvale; post village in Reeves County	Fort Davis.
Tracy; post village in Milam County.	
Travis; a central county, with an area of 1,036 square miles. The population was 47,386; the county seat, Austin. The mean magnetic declination in 1900 was 7° 55′. The mean annual rainfall is 40 inches, and the mean annual temperature 67°. The county is traversed by the International and Great Northern, the Austin and Northwestern, and the Houston and Texas Central railroads.	Burnet. Georgetown. Bastrop. Austin. Blanco.
Travis; peak in Travis County	Burnet.
Travis Peak; post village in Travis County.	
Trent; post village on the Texas and Pacific Railway, in Taylor County	Sweetwater.
Trenton; post village in Fannin County; population, 420.	
Tres Palacios; post village in Matagorda County.	
Tres Palacios; small stream flowing into Matagorda Bay.	
Trevat; post village in Trinity County.	
Tribune; post village in Grayson County.	
Trickham; post village on Mukewater Creek, in Coleman County	Coleman.
Trigger; mountain in Mills County	Brownwood.
Trinidad; post village in Henderson County.	
Trinity; a southeastern county, with an area of 704 square miles. The population was 10,976; the county seat, Groveton. The mean magnetic declination in 1900 was 7° 45′. The mean annual rainfall is 50 inches, and the mean annual temperature 68°. The county is traversed by the International and Great Northern, and the Missouri, Kansas and Texas railroads.	
Trinity; post village in Trinity County.	
Trinity; river of eastern Texas, heading in the northern part of the State, and flowing a little east of south to its mouth in Galveston Bay. Drainage area, 17,960 square miles; length, 404 miles.	
Trinity Mills; post village on the Missouri, Kansas and Texas Railway, in Dallas County	Dallas.
Trip; post village in Dallas County.	
Triple; hill in El Paso County	Sierra Blanca.
Trottie; post village in Newton County.	
Troup; post village in Smith County; population, 724.	
Trout; creek, a small right-hand branch of Fernando Creek, tributary to Llano River	Llano.
Troy; post village on the Missouri, Kansas and Texas Railway, in Bell County	Temple.
Truby; post village in Jones County.	
Truce; post village in Jack County.	
True; post village of Young County.	
Tucker; post village in Anderson County.	
Tularosa; post village in Kinney County.	
Tule; creek, a head branch of Red River in the Staked Plains.	
Tule; river, a small stream in southern Texas, sinking into the plain.	
Tulia; county seat of Swisher County.	
Tulip; post village in Fannin County.	

	Atlas sheet.
Tunis; post village in Burleson County.	
Turkey; creek, a small right-hand branch of South Fork of Trinity River, tributary to Clear Fork of Trinity River	Weatherford.
Turkey; creek, a left-hand branch of Brazos River	Palo Pinto.
Turkey; creek, a left-hand branch of Brushy Creek, tributary to San Gabriel River	Taylor.
Turkey; creek, a right-hand branch of South Palo Pinto Creek, tributary to Brazos River.	Stephenville. Palo Pinto.
Turkey; creek, a right-hand branch of North Fork of Chambers Creek, tributary to Trinity River	Cleburne.
Turkey; creek, a right-hand tributary to Nueces River in southwestern Texas.	
Turkey; mountain in Kinney County; elevation, 1,805 feet	Brackett.
Turkey; peak in Palo Pinto County	Palo Pinto.
Turkey; post village in Hall County.	
Turkey Mountain; triangulation station on mountain in Kinney County; elevation, 1,805 feet	Brackett.
Turnersville; post village on Middle Bosque Creek, tributary to Bosque River, in Coryell County	Meridian.
Turtle; creek, a small left-hand branch of Trinity River	Dallas.
Turtle Bayou; post village in Chambers County.	
Tuscaloosa; post village in Titus County.	
Tuscola; post village in Taylor County.	
Twiggs; creek, a left-hand branch of Nueces River.	
Twin; mountains in Erath County	Stephenville.
Twin; mountains in Hamilton County	Meridian.
Twin; mountains in Presidio County; elevation, 6,750 feet	Alpine.
Twin Buttes; hills in Tom Green County	Sherwood.
Twin Sister; peaks in Lampasas County	Lampasas.
Twin Sisters; post village in Blanco County.	
Twist; post village in Swisher County.	
Twohig; post village in Lasalle County.	
Twomile; creek, a right-hand intermittent branch of West Nueces River, tributary to the Nueces River	Nueces.
Tyler; a southeastern county, with an area of 925 square miles. The population was 11,899; the county seat, Woodville. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 52 inches, and the mean annual temperature 68°. The county is traversed by the Southern Pacific and the Texas and New Orleans railroads.	
Tyler; county seat of Smith County; population, 8,069.	
Tyson; post village in Hill County	Waco.
Uhland; post village in Caldwell County.	
Una; post village in Marion County.	
Uneva; post village in Henderson County.	
Union; post village in Wilson County.	
Unitia; post village in Delta County.	
Unity; post village in Wilson County.	
Upshur; a northeastern county, with an area of 587 square miles. The population was 16 266; the county seat, Gilmer. The mean magnetic declination in 1900 was 7° 15′. The mean annual rainfall is 50 inches, and the mean annual temperature 65°. The county is traversed by the St. Louis Southwestern and the Texas and Pacific railways.	

Atlas sheet.

Upson; post village in Maverick County.

Upton; a southwestern county, with an area of 1,190 square miles. The population was 48. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 18 inches, and the mean annual temperature 61°.

Upton; post village in Bastrop County.

Upper Keechi; right-hand branch of Trinity River.

Utica; post village in Smith County.

Utley; post village in Bastrop County.

Utopia; post village in Uvalde County.

Uvalde; a central county, with an area of 1,579 square miles. The population was 4,647; the county seat, Uvalde. The mean magnetic declination in 1900 was 8° 45′. The mean annual rainfall is 25 inches, and the mean annual temperature 70°. The county is traversed by the Southern Pacific Railroad. Nueces. Uvalde.

Uvalde; county seat of Uvalde County; population, 1,889.

Uz; post village in Montague County.

Valda; post village in Polk County.

Valdasta; post village in Collin County.

Vale; village in Runnels County .... Hayrick.

Valentine; branch, a small left-hand intermittent branch of Concho River .... Hayrick.

Valentine; post village on the Southern Pacific Railroad, in Presidio County .... Valentine.

Valera; village on the Gulf, Colorado and Santa Fe Railway, and on Home Creek .... Ballinger.

Valley; branch, a left-hand branch of Walnut Creek, tributary to West Fork of Trinity River .... Fort Worth.

Valley; canal in El Paso County .... El Paso.

Valley; post village in Guadalupe County.

Valley; river, a small right-hand branch of the Canadian River.

Valleycreek; post village in Fannin County.

Valley Mills; post village in Bosque County; population, 519.

Valley Mills; village on the Gulf, Colorado and Santa Fe Railway, in McLennan County .... Waco.

Valleysprings; post village in Llano County .... Llano.

Valleyview; post village in Cooke County.

Valverde; a southwestern county, with an area of 3,034 square miles. The population was 5,263; the county seat, Delrio. The mean magnetic declination in 1900 was 9° 15′. The mean annual rainfall is 20 inches, and the mean annual temperature 65°. The county is traversed by the Southern Pacific Railroad.

Van; post village in Van Zandt County.

Van Alstyne; post village in Grayson County; population, 1,940.

Vance; post village in Edwards County .... Nueces

Vanetia; post village in Leon County.

Vanhorn; post village in El Paso County.

Van Horn; creek, a left-hand intermittent branch of Rio Grande. Chispa. San Carlos.

Van Horn; mountains in El Paso County .... Chispa.

Atlas sheet.

Vanraub; post village in Bexar County.

Vansickle; post village in Hunt County.

Van Zandt; a northeastern county, with an area of 877 square miles. The population was 25,481; the county seat, Canton. The mean magnetic declination in 1900 was 7° 05′. The mean annual rainfall is 45 inches, and the mean annual temperature 65°. The county is traversed by the Texas and Pacific Railway.

Vashti; post village in Clay County.

Vaughan; post village in Hill County .... Waco.

Veal; branch, a small left-hand branch of Ash Creek, tributary to West Fork of Trinity River .... Weatherford.

Veale; creek, a left-hand branch of Cedar Creek, tributary to Brazos River .... Breckenridge.

Veals Station; post village in Parker County .... Weatherford.

Velasco; post village in Brazoria County.

Velma; post village in San Saba County.

Venus; post village in Johnson County.

Vera; post village in Knox County.

Verdi; post village in Atascosa County.

Vernal; post village in McLennan County.

Vernon; county seat of Wilbarger County; population, 1,993.

Verona; post village in Collin County.

Vesey; post village in Red River County.

Vesta; post village in Sabine County.

Vesta; switch on the Texas Central Railroad in Shackelford County .... Albany.

Veto; post village in Jack County.

Victor; post village in Erath County.

Victoria; a southern county, with an area of 883 square miles. The population was 13,678; the county seat, Victoria. The mean magnetic declination in 1900 was 8° 15′. The mean annual rainfall is 40 inches, and the mean annual temperature 70°. The county is traversed by the Southern Pacific, the Gulf, Western Texas and Pacific, and the New York, Texas and Mexican railroads.

Victoria; county seat of Victoria County; population, 4,010.

Victoria; village on Toyah Creek in Reeves County .... Fort Davis.

Vida; post village in Tyler County.

Vidette; post village in Liberty County.

Vieja; creek, a small left-hand branch of Rio Grande, in Presidio County.

Vieja; pass in Vieja Mountains, in Presidio County .... Chispa.

Vienna; post village in Lavaca County.

Viesca; post village in Falls County.

View; post village in Comal County.

Vigo; post village in Concho County .... San Angelo.

Vilas; post village in Bell County.

Village; creek, a right-hand branch of West Fork of Trinity River .... Fort Worth.

Village; right-hand branch of Neches River, in eastern Texas.

Village Mills; post village in Hardin County.

Vineland; post village in Collin County.

	Atlas sheet.
Vineyard; post village in Jack County.	
Vinton; post village in El Paso County.	
Viola; post village in Cass County.	
Virgile; village on the Rio Grande Railroad, in Parker County	Weatherford.
Virginia; point on the southern entrance to Galveston Bay.	
Vistula; post village in Houston County.	
Vivian; post village in Foard County.	
Vix; village on North Fork, tributary to Guadalupe River	Kerrville.
Voca; post village in McCulloch County	Brady.
Volente; post village on Sandy Creek, in Travis County	Austin.
Volga; post village in Houston County.	
Volney; post village in Burleson County.	
Vonormy; post village in Bexar County.	
Voxpopuli; post village in Colorado County.	
Waco; county seat of McLennan County; population, 20,868.	
Wade; post village in Guadalupe County.	
Waelder; post village in Gonzales County; population, 388 (1890).	
Wagner; post village in Hunt County.	
Wagon Wheel; hill in Uvalde County	Uvalde.
Waketon; post village in Denton County.	
Walburg; post village in Williamson County.	
Waldeck; post village in Fayette County.	
Waldo; post village in McLennan County.	
Waldrip; post village in McCulloch County.	
Waldrip; village in Coleman County	Brady.
Wales; post village in Lamar County.	
Walhalla; post village in Fayette County.	
Walker; a southeastern county, with an area of 754 square miles. The population was 15,813; the county seat, Huntsville. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 49 inches, and the mean annual temperature 67°. The county is traversed by the International and Great Northern Railroad.	
Walker; creek, a small left-hand branch of Leon River	Stephenville.
Walker; creek, a right-hand intermittent branch of Capote Creek, tributary to Rio Grande	San Carlos.
Walkers; branch, a left-hand tributary to West Fork of Trinity River	Fort Worth.
Wallace; branch, a small left-hand branch of Cypress Creek, tributary to Pedernales River	Blanco.
Wallace; branch, a small left-hand branch of Nolands River, tributary to Brazos River	Cleburne.
Wallace; creek, a right-hand branch of San Saba River, tributary to Colorado River	San Saba.
Waller; post village in Waller County.	
Waller; a southeastern county, with an area of 510 square miles. The population was 14,246; the county seat, Hempstead. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 45 inches, and the mean annual temperature 68°. The county is traversed by the Missouri, Kansas and Texas and the Houston and Texas Central railroads.	

	Atlas sheet.
Walling; post village in Hill County.	
Wallis Station; post village in Austin County.	
Wallisville; county seat of Chambers County.	
Walnut; creek, a right-hand branch of Sandy Creek, tributary to Colorado River.	Blanco. Burnet.
Walnut; creek, a small right-hand tributary to Brazos River	Palo Pinto.
Walnut; creek, a left-hand branch of Mountain Creek, tributary to West Fork of Trinity River.	Cleburne. Fort Worth. Dallas.
Walnut; creek, a small right-hand branch of Threadgill Creek, tributary to Llano River.	Kerrville. Mason.
Walnut; city on Steele Creek and on the Texas Central Railway	Granbury.
Walnut; creek, a left-hand branch of Leon River, tributary to Little River	Hamilton.
Walnut; creek, a right-hand branch of Colorado River	Austin.
Walnut; creek, a left-hand branch of Brazos River, in Hood County.	Weatherford. Granbury.
Walnut; creek, a right-hand branch of West Fork of Trinity River	Weatherford.
Walnut; spring in Hays County	Blanco.
Walnut Springs; post village in Bosque County; population, 682 (1890).	
Waloope; creek, a left-hand branch of Salt Creek, tributary to Colorado River	Eden.
Walton; post village in Van Zandt County.	
Wamba; post village in Bowie County.	
Waneta; post village in Houston County.	
Ward; a southwestern county, with an area of 858 square miles. The population was 1,451; the county seat, Barstow. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 15 inches, and the mean annual temperature 60°. The county is traversed by the Texas and Pacific Railway.	
Warda; post village in Fayette County.	
Waring; post village in Kendall County.	
Warren; post village in Tyler County; population, 833 (1890).	
Warrenton; post village in Fayette County.	
Warring; creek, a right-hand branch of Leon River, tributary to Little River	Hamilton.
Wash; branch, a small left-hand branch of Brazos River	Palo Pinto.
Washboard; creek, a right-hand intermittent branch of Cowhouse Creek, tributary to Little River.	Brownwood. Hamilton.
Washburn; post village in Armstrong County.	
Washington; post village in Washington County.	
Washington; a southeastern county, with an area of 568 square miles. The population was 32,931; the county seat, Brenham. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 45 inches, and the mean annual temperature 68°. The county is traversed by the Gulf, Colorado and Santa Fe, and the Houston and Texas Central railroads.	
Washita; river, a left-hand branch of Red River heading in the Panhandle and flowing in a general southeast direction through Indian Territory to its mouth.	

	Atlas sheet.
Washout; mountain in Erath County	Stephenville.
Waskom; post village in Harrison County.	
Watauga; post village in Tarrant County.	
Waterloo; post village in Williamson County.	
Waters; creek, a small right-hand branch of Llano River, tributary to Colorado River	Llano.
Watervalley; post village in Tom Green County.	
Watkins; post village in Pecos County.	
Watson; post village in Red River County.	
Watt; post village in Limestone County.	
Watter; creek, a small left-hand intermittent branch of Colorado River	Austin.
Watters; post village on the Austin and Northwestern Railroad and on Walnut Creek, in Travis County	Austin.
Watterson; post village in Bastrop County.	
Watts; creek, a small right-hand branch of Jim Ned Creek, tributary to Pecan Bayou	Coleman.
Waverly; post village in Walker County.	
Waxahachie; county seat of Ellis County; population, 4,215.	
Way; post village in Hall County.	
Wayback; village in Coryell County	Lampasas.
Wayland; post village in Stephens County	Breckenridge.
Wayside; post village in Armstrong County.	
Weakly; branch, a small right-hand branch of South Fork of Chambers Creek, tributary to Trinity River	Cleburne.
Wealthy; post village in Leon County.	
Weatherford; city on South Fork of Trinity River, on the Texas and Pacific Railway, in Parker County; population, 4,786	Weatherford.
Weaver; post village in Hopkins County.	
Webb; a southern county, with an area of 3,421 square miles. The population was 21,851; the county seat, Laredo. The mean magnetic declination in 1900 was 8° 40′. The mean annual rainfall was 25 inches, and the mean annual temperature 73°. The county is traversed by the International and Great Northern, the Mexican Central, and the Rio Grande and Eagle Pass railroads.	
Webb; post village in Tarrant County.	
Webberville; post village on Colorado River, in Travis County	Austin.
Webster; post village in Harris County.	
Webster; small right-hand tributary to Colorado River	Burnet.
Weches; post village in Houston County.	
Weed; valley near Leon River	Eastland.
Weesatche; post village in Goliad County.	
Weimar; post village in Colorado County; population, 1,337.	
Welch; creek, a small left-hand intermittent branch of Kickapoo Creek, tributary to Concho River	San Angelo.
Welcome; post village in Austin County.	
Weldon; post village in Houston County.	
Welfare; post village in Kendall County.	
Wellborn; post village in Brazos County.	
Wellington; county seat of Collingsworth County.	

	Atlas sheet.
Wells; post village in Cherokee County.	
Weser; post village in Goliad County.	
Wesley; post village in Austin County; population, 370 (1890).	
Wesson; post village in Comal County.	
West; post village in McLennan County; population, 851.	
West; fork, a right-hand branch of Sandy Creek, tributary to Colorado River	Bastrop.
West; post village on the Missouri, Kansas and Texas Railway, in Hill County	Waco.
West Base; a triangulation station on the Southern Pacific Railroad, in Kinney County	Brackett.
West Base; triangulation station in Travis County	Austin.
Westbrook; village in Blanco County	Fredericksburg.
West Bull; creek, a small right-hand branch of Bull Creek, tributary to Colorado River	Austin.
Westfield; post village in Harris County.	
West Fork; a small right-hand branch of Bull Creek, tributary to Colorado River	Austin.
West Fork Clear Creek; a right-hand branch of Clear Creek, tributary to Colorado River	Coleman.
West Fork of Trinity River; a right-hand branch of Trinity River.	Weatherford. Fort Worth. Dallas.
Westminster; post village in Collin County.	
West Mountain; post village in Upshur County.	
West Noland; creek, a head branch of Nolands River	Granbury.
Weston; post village in Collin County.	
Westphalia; post village in Falls County.	
Westpoint; post village in Fayette County.	
Westville; post village in Trinity County.	
Wetmore; post village in Bexar County.	
Weymiller; butte in Uvalde County	Uvalde.
Wharton; a southeastern county, with an area of 1,137 square miles. The population was 16,942; the county seat, Wharton. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 45 inches, and the mean annual temperature 70°. The county is traversed by the Gulf, Western Texas and Pacific Railway.	
Wharton; county seat of Wharton County.	
Wheat; creek, a small right-hand branch of Little River	Taylor.
Wheat; post village in Scurry County.	
Wheatland; post village in Dallas County	Dallas.
Wheeler; a county situated in the Panhandle, with an area of 851 square miles. The population was 636; the county seat, Mobeetie. The mean magnetic declination in 1900 was 10° 30′. The mean annual rainfall is 22 inches, and the mean annual temperature 59°.	
Wheeler; post village in Potter County.	
Wheelock; post village in Robertson County.	
Wherry; post village in Rusk County.	
White; canyon, a right-hand intermittent branch of Double Mountain Fork of Brazos River	Roby.

	Atlas sheet.
White; creek, a right-hand branch of Sandy Creek, tributary to Colorado River.	Fredericksburg. Llano. Burnet.
White; creek, a small left-hand branch of Lampasas River, tributary to Little River	Lampasas.
White Bluff; creek, a small right-hand branch of Paluxy Creek, tributary to Brazos River	Granbury
White Deer; creek, a small right-hand branch of Canadian River.	
Whitedeer; post village in Carson County.	
Whitefish; post village in Donley County.	
Whiteflat; post village in Motley County.	
Whitehall; post village in Grimes County.	
Whitehouse; post village in Smith County.	
Whitemound; post village in Grayson County.	
White Oak; creek, a small right-hand branch of Pedernales River	Kerrville.
White Oak; creek, a small left-hand branch of North Grape Creek, tributary to Pedernales River	Fredericksburg.
White Oak; creek, a small left-hand branch of Fall Creek, tributary to Llano River	Kerrville.
White Rock; creek, a left-hand branch of Trinity River	Dallas.
White Rock; creek, a left-hand tributary to Trinity River	Cleburne.
Whiterock; left-hand branch of Brazos River	Waco.
Whiterock; post village in Hunt County.	
White Sandy; creek, a small right-hand branch of Canadian River.	
Whitesboro; post village in Grayson County; population, 1,243.	
Whitewright; post village in Grayson County; population, 1,804.	
Whitfield; post village in Swisher County.	
Whitman; post village in Washington County.	
Willows; village in Brewster County	Fort Davis.
Wills Point; post village in Van Zandt County; population, 1,347.	
Wilmer; post village on the Houston and Texas Central Railroad, in Dallas County	Dallas.
Wilson; a southern county, with an area of 784 square miles. The population was 13,961; the county seat, Floresville. The mean magnetic declination in 1900 was 8° 30′. The mean annual rainfall is 35 inches, and the mean annual temperature 70°. The county is traversed by the San Antonio and Aransas Pass Railway.	
Wilson; branch, a small right-hand intermittent branch of Camp Creek, tributary to Brazos River	Granbury.
Wilson; creek, a small left-hand branch of Brazos River	Granbury.
Wilson; post village in Comanche County	Hamilton.
Whitney; post village on the Texas Central Railroad, in Hill County	Waco.
Whitson; post village in Coryell County.	
Whitt; post village in Parker County; population, 278 (1890)	Palo Pinto.
Whittaker; post village in Burleson County.	
Whitville; post village in Comanche County	Brownwood.

	Atlas sheet.
Wichita; a north central county, with an area of 606 square miles. The population was 5,806; the county seat, Wichita Falls. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 25 inches, and the mean annual temperature 62°. The county is traversed by the Fort Worth and Denver City, the Missouri, Kansas and Texas, and the Wichita Valley railroads.	
Wichita; river, a right-hand branch of Red River, in northern Texas.	
Wichita Falls; county seat of Wichita County; population, 2,480.	
Wied; post village in Lavaca County.	
Wieland; post village in Hunt County.	
Wiessbluff; post village in Jasper County.	
Wiggins; post village in Houston County.	
Wilbarger; a north central county, with an area of 932 square miles. The population was 5,759; the county seat, Vernon. The mean magnetic declination in 1900 was 9° 35′. The mean annual rainfall is 28 inches, and the mean annual temperature 62°. The county is traversed by the Fort Worth and Denver City Railway.	
Wilbarger; creek, a left-hand branch of Colorado River	Austin. Bastrop.
Wilbarger; creek, a right-hand branch of Colorado River	Brady. San Saba.
Wilcox; post village in Burleson County.	
Wild Cat; creek, a small right-hand intermittent branch of Home Creek, tributary to Colorado River	Coleman.
Wildcat; mountain in Edwards County	Nueces.
Wildcat; post village in Henderson County.	
Wilderville; post village in Falls County.	
Wiley; mountains in El Paso County	Chispa.
Wilkinson; post village in Titus County.	
Willard; post village in Trinity County.	
William Penn; post village in Washington County.	
Williams; creek, a right-hand branch of Pedernales River	Fredericksburg.
Williamsburg; post village in Lavaca County.	
Williamson; a central county, with 1,169 square miles. The population was 38,072; the county seat, Georgetown The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 40 inches, and the mean annual temperature 68°. The county is traversed by the Austin and Northwestern, the Missouri, Kansas and Texas, and the International and Great Northern railroads.	Burnet. Georgetown. Austin. Taylor. Bastrop.
Williamson; creek, a left-hand branch of San Gabriel River	Georgetown. Taylor.
Williamson; creek, a left hand branch of Onion Creek, tributary to Colorado River	Austin.
Williams Store; post village in Bastrop County	Austin.
Willis; creek, a small right-hand branch of Pecan Bayou	Coleman. Brownwood.
Willis; creek, a right-hand branch of Pecan Bayou, tributary to Colorado River.	Coleman. Brownwood.

	Atlas sheet.
Willis; post village in Montgomery County.	
Willoughby; branch, a small left-hand branch of Pompey Creek, tributary to Pecan Bayou	Brownwood.
Willow; branch, a small left-hand branch of Walnut Creek, tributary to West Fork of Trinity River	Fort Worth.
Willow; creek, a left-hand branch of Wilbarger Creek, tributary to Colorado River	Bastrop.
Willow; creek, a small left-hand branch of South Bosque River, tributary to North Bosque River	Temple.
Willow; creek, a small left-hand branch of Childress Creek, tributary to Brazos River	Waco.
Willow; creek, a left-hand branch of Llano River	Mason.
Willow; creek, a left-hand branch of Concho River	Hayrick.
Willow; creek, a left-hand branch of North Grape Creek, tributary to Pedernales River	Fredericksburg.
Willow; creek, a left-hand branch of South Fork of Trinity River, tributary to West Fork of Trinity River	Weatherford.
Willow; post village on Willow Creek, in Gillespie County	Fredericksburg.
Willowhole; post village in Madison County.	
Willowpoint; post village in Wise County.	
Wimberly; post village in Hays County.	
Winchester; post village in Fayette County.	
Windmill; creek, a right-hand tributary to Nueces River	Uvalde.
Windom; post village in Fannin County.	
Windthorst; post village in Archer County.	
Wine; creek, a small right-hand branch of Canadian River.	
Winfield; post village in Titus County.	
Winfree; post village in Chambers County.	
Wingate; post village in Runnels County.	
Winkler; a southwestern county, with an area of 888 square miles. The population was 60. The mean magnetic declination in 1900 was 10° 45′. The mean annual rainfall is 15 inches, and the mean annual temperature 60°. The county is traversed by the Texas and Pacific Railway.	
Winkler; post village in Navarro County.	
Winnie; post village in Chambers County.	
Winnsboro; post village in Wood County; population, 899.	
Winona; post village in Smith County.	
Winters; post village in Runnels County.	
Winters Chapel; village on Sweetwater Creek, tributary to Clear Fork of Brazos River; elevation, 1,820 feet	Roby.
Wire Hollow; creek, a small left-hand intermittent tributary to Colorado River	Ballinger.
Wise; a north central county, with an area of 843 square miles. The population was 27,116; the county seat, Decatur. The mean magnetic declination in 1900 was 8° 45′. The mean annual rainfall is 35 inches, and the mean annual temperature 64°. The county is traversed by the Chicago, Rock Island and Texas, and the Fort Worth and Denver City railroads.	Fort Worth. Weatherford.
Wise; post village in Van Zandt County.	
Witting; post village in Lavaca County.	
Woden; post village in Nacogdoches County.	
Wokaty; post village in Milam County.	

	Atlas sheet.
Wolf; branch, a small left-hand branch of Paluxy Creek, tributary to Brazos River.	Stephenville. Granbury.
Wolf; creek, a small right-hand branch of Brazos River	Palo Pinto.
Wolf; creek, a right-hand branch of Pedernales River	Kerrville. Fredericksburg.
Wolf; mountain in Palo Pinto County	Palo Pinto.
Wolf Crossing; village in Llano County	Burnet.
Wolfe; city in Hunt County; population, 1,549.	
Womack; post village in Bosque County.	
Wood; a northeastern county, with an area of 688 square miles. The population was 21,048; the county seat, Quitman. The mean magnetic declination in 1900 was 7° 30′. The mean annual rainfall is 48 inches, and the mean annual temperature 65°. The county is traversed by the Missouri, Kansas and Texas, and the Texas and Pacific railways.	
Wood; branch, a right-hand branch of Marys Creek, tributary to Clear Fork of Trinity River.	Weatherford. Fort Worth.
Woodbine; post village in Cooke County.	
Woodbury; post village in Hill County	Cleburne.
Wood Hollow; a small right-hand intermittent branch of South Bosque River, tributary to Bosque River	Stephenville.
Woodland; post village in Red River County.	
Woodlawn; post village in Harrison County.	
Woods; post village in Panola County.	
Wood Slough; a small left-hand intermittent branch of Turkey Creek, tributary to Nueces River	Uvalde.
Woodstock; post village in Bowie County.	
Woodville; county seat of Tyler County; population, 518 (1890).	
Wooster; post village in Harris County.	
Wootan Wells; post village in Robertson County; population, 268 (1890).	
Word; post village in Shelby County.	
Wortham; post village in Freestone County; population, 401 (1890).	
Worthing; post village in Lavaca County.	
Wright; creek, a left-hand branch of Llano River	Llano.
Wright; post village in Swisher County.	
Wrightsboro; post village in Gonzales County.	
Wusser; creek, a right hand branch of Palo Pinto Creek, in Palo Pinto County	Palo Pinto.
Wyatt; post village in Ellis County.	
Wyleville; village in Erath County	Stephenville.
Wylie; post village in Collin County; population, 733.	
Yale; post village in Franklin County.	
Yancey; post village in Medina County.	
Yanceyville; village in Stephens County	Breckenridge.
Yantis; post village in Wood County.	
Yarboro; post village in Grimes County.	
Yarbroville; post village in Limestone County.	
Yarrelton; post village in Milam County	Taylor.
Yearling Head; mountain in Llano County; elevation, 1,669 feet	Llano.
Yegua; knobs, hills in Lee and Bastrop counties	Bastrop.

	Atlas sheet.
Yegua; river, a right-hand branch of Brazos River, in central Texas.	
Yegui; creek, a right-hand branch of Brazos River.	
Yellow; branch, a small right-hand branch of Gonzales Creek, tributary to Clear Fork of Brazos River	Breckenridge.
Yellow; waterhole, a reserve in Leona River, in Uvalde County.	Uvalde.
Yerby; post village in Freestone County.	
Yero; post village in Walker County.	
Yew; post village in Fannin County.	
Yoakum; a northwestern county, with an area of 840 square miles. The population was 26. The mean magnetic declination in 1900 was 11° 15′. The mean annual rainfall is 15 inches, and the mean annual temperature 58°.	
Yoakum; post village in Dewitt County: population, 3,499.	
Yorkcreek; post village in Guadalupe County.	
Yorktown; post village in Dewitt County; population, 846.	
Young; a north central county, with an area of 821 square miles. The population was 6,540; the county seat, Graham. The mean magnetic declination in 1900 was 9° 30′. The mean annual rainfall is 30 inches, and the mean annual temperature 64°.	
Youngsport; post village on Lampasas River, in Bell County	Georgetown.
Yowell; post village in Hunt County.	
Ysleta; city on the Rio Grande and on the Southern Pacific Railroad; elevation, 3,664 feet; population, 1,528 (1898).	
Yuno; post village in Angelina County.	
Zana; post village in San Augustine County.	
Zapata; a southern county, with an area of 1,269 square miles. The population was 4,760; the county seat, Carrizo. The mean magnetic declination in 1900 was 8°. The mean annual rainfall is 25 inches, and the mean annual temperature 75°.	
Zapp; post village in Fayette County.	
Zavalla; a southern county, with an area of 1,328 square miles. The population was 792; the county seat, Batesville. The mean magnetic declination in 1900 was 8° 25′. The mean annual rainfall is 25 inches, and the mean annual temperature 70°.	
Zeevee; post village in Hill County.	
Zephyr; post village on the Gulf, Colorado and Santa Fe Railway, on Bee branch, in Brown County	Brownwood.
Zint; post village in Gonzales County.	
Zorn; post village in Guadalupe County.	
Zulrich; post village in Madison County.	
Zulu; post village in Hansford County.	

PUBLICATIONS OF UNITED STATES GEOLOGICAL SURVEY.

[Bulletin No. 190.]

The serial publications of the United States Geological Survey consist of (1) Annual Reports, (2) Monographs, (3) Professional Papers, (4) Bulletins, (5) Mineral Resources, (6) Water-Supply and Irrigation Papers, (7) Topographic Atlas of United States—folios and separate sheets thereof, (8) Geologic Atlas of United States—folios thereof. The classes numbered 2, 7, and 8 are sold at cost of publication; the others are distributed free. A circular giving complete lists may be had on application.

The Bulletins (which were formerly sold, but a joint resolution approved May 16, 1902, directed that they should be distributed gratuitously) treat of a variety of subjects, and the total number issued is large. They have therefore been classified into the following series: A, Economic geology; B, Descriptive geology; C, Systematic geology and paleontology; D, Petrography and mineralogy; E, Chemistry and physics; F, Geography; G, Miscellaneous. This bulletin is the twenty-eighth in Series F, the complete list of which follows:

BULLETINS, SERIES F, GEOGRAPHY.

5. Dictionary of altitudes in United States, by Henry Gannett. 1884. 325 pp.

6. Elevations in Dominion of Canada, by J. W. Spencer. 1884. 43 pp.

13. Boundaries of United States and of the several States and Territories, with historical sketch of territorial changes, by Henry Gannett. 1885. 135 pp. (Exhausted.)

48. On form and position of sea level, by R. S. Woodward. 1888. 88 pp.

49. Latitudes and longitudes of certain points in Missouri, Kansas, and New Mexico, by R. S. Woodward. 1889. 133 pp.

50. Formulas and tables to facilitate the construction and use of maps, by R. S. Woodward. 1889. 124 pp.

70. Report on astronomical work of 1889 and 1890, by R. S. Woodward. 1890. 79 pp.

72. Altitudes between Lake Superior and Rocky Mountains, by Warren Upham. 1891. 229 pp.

76. Dictionary of altitudes in United States (second edition), by Henry Gannett. 1891. 393 pp. (Exhausted; see No. 160, below.)

115. Geographic dictionary of Rhode Island, by Henry Gannett. 1894. 31 pp.

116. Geographic dictionary of Massachusetts, by Henry Gannett. 1894. 126 pp.

117. Geographic dictionary of Connecticutt, by Henry Gannett. 1894. 67 pp.

118. Geographic dictionary of New Jersey, by Henry Gannett. 1894. 131 pp.

122. Results of primary triangulation, by Henry Gannett. 1894. 412 pp., 17 pls.

123. Dictionary of geographic positions, by Henry Gannett. 1895. 183 pp., 1 map.

154. Gazetteer of Kansas, by Henry Gannett. 1898. 246 pp., 6 pls.

160. Dictionary of altitudes in United United States (third edition), by Henry Gannett. 1899. 775 pp.

166. Gazetteer of Utah, by Henry Gannett. 1900. 43 pp., 1 map.

169. Altitudes in Alaska, by Henry Gannett. 1900. 13 pp.

170. Survey of boundary line between Idaho and Montana from international boundary to crest of Bitterroot Mountains, by R. U. Goode. 1900. 67 pp., 14 pls.

171. Boundaries of United States and of the several States and Territories, with outline of history of all important changes of territory (second edition), by Henry Gannett. 1900. 142 pp., 53 pls.

174. Survey of northwestern boundary of United States, 1857-1861, by Marcus Baker. 1900. 78 pp., 1 pl.

175. Triangulation and spirit leveling in Indian Territory, by C. H. Fitch 1900 141 pp., 1 pl.

181. Results of primary triangulation and primary traverse, fiscal year 1900-'01, by H. M. Wilson, J. H. Renshawe, E. M. Douglas, and R. U. Goode. 1901. 240 pp., 1 map.

183. Gazetteer of Porto Rico, by Henry Gannett. 1901. 51 pp.

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187. Geographic dictionary of Alaska, by Marcus Baker. 1901. 446 pp.

190. Gazetteer of Texas, by Henry Gannett. 1902. 162 pp.

Correspondence should be addressed to

The Director,
United States Geological Survey,
Washington, D. C.

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Series.

United States. *Department of the interior.* (*U. S. geological survey.*)

Department of the interior | — | Bulletin | of the | United States | geological survey | no. 190 | Series F, Geography, 28 | [Seal of the department] |

Washington | government printing office | 1902

Second title: United States geological survey | Charles D. Walcott, director | — | A | gazetteer of Texas | by | Henry Gannett | [Vignette] |

Washington | government printing office | 1902

8°. 162 pp., 8 pls.

Author.

Gannett (Henry).

United States geological survey | Charles D. Walcott, director | — | A | gazetteer of Texas | by | Henry Gannett | [Vignette] |

Washington | government printing office | 1902

8°. 162 pp., 8 pls.

[UNITED STATES. *Department of the interior.* (*U. S. geological survey.*) Bulletin 190.]

Subject.

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8°. 162 pp., 8 pls.

[UNITED STATES. *Department of the interior.* (*U. S. geological survey.*) Bulletin 190.]

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DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES GEOLOGICAL SURVEY

No. 191

SERIES C, SYSTEMATIC GEOLOGY AND PALEONTOLOGY, 56

NORTH AMERICAN GEOLOGIC FORMATION NAMES:
BIBLIOGRAPHY, SYNONYMY, AND
DISTRIBUTION.—Weeks

WASHINGTON
GOVERNMENT PRINTING OFFICE
1902

UNITED STATES GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

NORTH AMERICAN

GEOLOGIC FORMATION NAMES

BIBLIOGRAPHY, SYNONYMY AND DISTRIBUTION

BY

FRED BOUGHTON WEEKS

WASHINGTON
GOVERNMENT PRINTING OFFICE
1902

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LETTER OF TRANSMITTAL.

Department of the Interior,
United States Geological Survey,
Washington, D. C., November 27, 1901.

Sir: I have the honor to transmit herewith a manuscript entitled North American Geologic Formation Names: Bibliography, Synonymy, and Distribution, and to request that it be published as a bulletin of the Survey.

Very respectfully,

F. B. Weeks.

Hon. Charles D. Walcott,
Director United States Geological Survey.

NORTH AMERICAN GEOLOGIC FORMATION NAMES: BIBLIOGRAPHY, SYNONYMY, AND DISTRIBUTION.

By F. B. WEEKS.

INTRODUCTION.

This publication contains:

(1) A list of all North American sedimentary formation names, arranged alphabetically by geographic provinces under each of the larger geologic subdivisions to which they have been assigned, in general, by various authors.

(2) A list of the names used to designate a particular stratum or aggregate of sedimentary strata within the area of North America. It is arranged alphabetically, and the references to each name are placed in chronological order. Each name appears in this list as it is used in the reference cited. The references refer only to the more important descriptions of formations or discussions of correlation, synonymy, or nomenclature. The geologic time-division to which a formation belongs, and the State, Territory, or country in which it occurs, form a part of each entry.

(3) A list of the geographic names that have been applied to masses of igneous rocks occurring in North America. Only those names that indicate that the rocks are of igneous origin have been included in this list. All names of metamorphic or other rocks of uncertain origin are included in the list of sedimentary formation names.

(4) An index list of formation names.

At the inception of this work it was seen that it would be necessary to read carefully every article or book on geology that had been published in order to be certain that every name that had been used to designate particular strata should be included in this catalogue. It was evident that the necessity for an early completion of the work and the limited time that could be devoted to it rendered it impossible to adopt such a plan. Furthermore, it is well known that during the early years of geologic literature names were employed so loosely that in very many cases it is impossible to determine whether it was intended to use the name merely in a descriptive sense or as a distinctive formation name. It may happen, therefore, that names are included in this list which were not intended to be proposed as formation names, or that the first mention of a name subsequently used as a distinctive formation name has been omitted.

This work not only presents a list of formation names, and their synonymy and correlations as given by authors, but also serves as a bibliography of the literature describing each formation. Mere mentions of occurrence were not entered, but it was intended to include descriptions of a formation which defined it either wholly or in part. It is probably true that the discrimination as to what is a sufficient description to entitle the reference to be included in this catalogue has not been of such a uniform character as it would have been if the preparation of the catalogue had been wholly the work of one person; but it is not considered less valuable on this account, since all the really important descriptions are believed to have been included.

No attempt has been made to indicate the synonymy or taxonomic value of any formation except as it was given by the author of the reference cited. It is intended to refer the investigator to the literature of any North American geologic formation name, and he must exercise his own judgment as to its value and standing as a formation name.

The work of preparing this bulletin has been in progress for nearly three years. It has been interrupted from time to time by other office and field work of the author. During the winter of 1899–1900 it became evident that this work must be completed at once for the use of members of the United States Geological Survey in assigning names to the formations which were being delineated on the folios forming the Geologic Atlas of the United States. The Director of the Survey requested the following geologists to assist in completing the work: Messrs. M. R. Campbell, N. H. Darton, J. S. Diller, G. H. Girty, C. W. Hayes, F. H. Knowlton, F. L. Ransome, G. O. Smith, A. C. Spencer, T. W. Stanton, J. A. Taff, T. W. Vaughan, and David White. The literature that then remained to be examined was apportioned among these gentlemen, and since that time the material has been brought down to January 1, 1901, by the author. The methods of preparing this material, previously adopted, were followed with as much uniformity as was possible, and the author, as well as geologists in general, is greatly indebted to these gentlemen who assisted in bringing the work to an early completion.

In the discrimination of what constitutes a sufficient description of a formation and the determination of the problems of nomenclature, the following suggestions are offered. These represent, in brief, the conclusions of the author as the result of his studies of the geologic literature of North America.

A formation which is associated with other strata at the particular locality from which it takes its name should be defined, either by its lithologic or its faunal characters, in such a manner that the reader, or the observer in the field, can differentiate it from the other strata with which it occurs. Where a name is given to a series of strata of varied lithologic character and of wide distribution, the general characters of the lithologic variations and the stratigraphic relations should be so given as to indicate, approximately, what are its relations to other formations of the same or related provinces.

In determining the names to be applied to formations the laws of priority and prescription (general usage) should be observed. The name first given to a definite formation or series of strata should hold, unless this name is superseded in literature by another which has come into general use. In the latter case the first name should be dropped for this formation; and, where there can be no question as to the general usage of the subsequent name, the first name might be used again for a different formation without causing serious trouble. Such reuse would certainly be very advantageous in regions where there are few geographic names.

As an illustration, the name Berkshire limestone was first applied to certain limestones in western Massachusetts. Subsequently the name Stockbridge limestone was employed to designate this formation and has since come into general usage for this subdivision of the Cambrian in that region. The name Berkshire limestone has therefore become obsolete, and the name might be used to designate some other formation without creating confusion.

The duplication of formation names has become a serious matter, as will be seen from an examination of this list. It seems very desirable that in the future there should be no further duplication; new names should replace those which can not hold their present varied definitions; thus in time all the present discrepancies in the nomenclature of formations would disappear from geologic literature.

It is the intention of the writer to continue this list in the yearly publication, Bibliography and Index of North American Geology, etc., under the subheading, "Geologic formations described."

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SYNONYMIC TABLE OF PERIOD NAMES USED BY AUTHORS AND THOSE USED BY THE UNITED STATES GEOLOGICAL SURVEY.

Names used by authors.		United States Geological Survey classification.
Glacial		Pleistocene.
Quaternary		
Pleistocene		
Tertiary	Pliocene	Neocene.
	Miocene	
	Oligocene	Eocene.
	Eocene	
Cretaceous		Cretaceous.
Jura		Juratrias.
Trias		
Permian		Carboniferous.
Carboniferous		
Devonian		Devonian.
Silurian		Silurian.
Ordovician		
Cambrian		Cambrian.
Algonkian		Algonkian.
Archean		Archean.

LIST OF GEOLOGIC FORMATION NAMES, ARRANGED BY GEOGRAPHIC PROVINCES UNDER THE GEOLOGIC PERIODS TO WHICH THEY HAVE BEEN ASSIGNED.

PLEISTOCENE.

Alaska.

Cook Inlet.
Ground Ice.
Kanektok.
Kowak.
Kuskokwim.
Pinnacle.
St. Elias.
Saskachewan.
Togiak.
Yukon.

Appalachian region.

Teay.

Atlantic Coast region.

Barnstable.
Barrington.
Bryn Mawr.
Cape May.
Columbia.
Cornfield Harbor.
Jamesburg.
Middleboro.
Mohegan.
Mussel-bearing.
Packer.
Philadelphia.
Queens River.
Sankaty.
Simmons Bluff.
Terrace.
Tisbury.
Truro.
Yellow.

Canada.

Galt.
Leda.
Kingston.
Saugeen.
Saxicava.
Syrtensian.
Toronto.

Great Lakes region.

Albertan.
Algoma.
Arkona.
Artemisia.
Calumet Beach.
Gary.
Grassmere.
Mesabi.
Van Wert.
Wisconsin.

Great Plains region.

Antelope.
Cache Valley.
Equus.
Gentile Valley.
Kansan.
Lake Bonneville.
Malade Valley.
Marsh Creek.
McPherson.
Meade.
Megalonyx.
Salt Creek.
Third Moraine.
Wellington.

Gulf States.

Biloxi.
Mobile.
Port Hudson.

Mississippi Valley.

Aftonian.
Altamont.
Bluff.
Bottom Prairie.
Boulder.
Buchanan.
Cerro Gordo.
Delta.
Forest.
Fourth Moraine.
Gravel.
Highland.
Illinoian.
Iowan.
Iroquois.
Itasca.
Loess.
Marseilles.
Orange Sand.
Peorian.
Sangamon.
Shelbyville.
Silveria.
Tolleston.
Valley.
Valparaiso.
Vermilion.
Western Valley.
Yarmouth.

Pacific Coast region.

Admiralty.
Coos.
Douty.
Gale.
Midland.
Orting.

PLEISTOCENE—continued.

Osceola.
Puyallup.
San Pedro.
Steilacoom.
Superjacent.
Tehachipa.
Vashon.
Yakutat.

Rocky Mountain region.

Hot Spring.
Sheridan.
Stanford.

Southwestern region.

Coast.
Guertie.
Leona.
Prairie d'Ane.
Seymour.
White Prairie d'Ane.

West Indies.

Barbican.
Bogue Island.
Buff Bay.
Champlain.
Coastal.
Falmouth.
May Pen.
Montego.
Neudeckian.
Ozarkian.
Warren.
Zapata.

TERTIARY.

Alaska.

Hayes River.
Kenai.
Nulato.
Nushagak.
Orca.
Palisades.
Pinnacle.
Saskatchewan.
Tanana.
Tok.
Twelvemile.
Tyonek.
Unga.
Yakutat.
Yentna.

Appalachian region.

Flatwoods.
Hickman.
Irvine.

Atlantic Coast region.

Alachua.
Altamaha.
Alum Bluff.
Appomattox.
Aquia Creek.
Archer.
Ashley.
Aspalaga.
Autocene.
Beacon Hill.
Branditown.
Brandon.
Bryn Mawr.
Caloosahatchie.
Cape Cod.
Carolinian.
Chattahoochee.
Chesapeake.
Cooper River.
Coralline.
Croatan.
Duplin.
Eo-Lignitic.
Floridian.
Glassboro.
Gray.
Great Carolina.
Hawthorne.
Holocene.
Jacksonboro.
Lafayette.
Lisbon.
Manatee.
Marl.
Marlborough.
Marylandinian.
Mont Alto.
Mount Holly.
Nashaquitsa.
Orangeburg.
Pamunkey.
Patuxent.
Pensauken.
Piscataway.
Pulaski.
Santee.
Shark River.
Shell Bluff.
Squanjum.
Tuscahoma.
Vineyard.
Virginian.
Waccamaw.
Weyquosque.
Wilmington.
Woodstock.
Yellow.

Canada.

Carmanah Point.
Coldwater.
Lawrencian.
Leda.
Roche Percee.
Saxicava.
Sooke.
Tranquille.

Central America.

Brito.

Great Basin region.

Amyzon.
Bishop Mt.
Bitter Creek
Bridger.
Cache Lake.
Esmerelda.
Estuary.
Fort Bridger.
Green River.

TERTIARY—continued.

Humboldt.
Idaho.
Manti.
Para.
Pink Cliff.
Plant.
Salt Lake.
Tower.
Truckee.
Uinta.
White.

Great Lakes region.

Vermilion.

Great Plains region.

Equus.
Kingsdown.
McPherson.
Megalonyx.
Nebrasca.
Pearlette.
Protoceras.
White River.

Greenland.

Atane.

Gulf States.

Arcadia.
Bashi.
Bells Landing.
Black Bluff.
Buhrstone.
Chickasaw.
Chipola.
Claiborne.
Clayton.
Coal Bluff.
Cocksfield Ferry.
Coral.
De Soto.
Diablo-Davis.
Ecphora.
Fayette.
Fleming.
Frio.
Grand Gulf.
Greensand.
Greggs Landing.
Hatchetigbee.
Jackson.
Jacksonian.
Jacksonville.
Lagarto.
Lignite.
Lignitic.
Lufkin.
Marine.
Matthews Landing.
Middleton.
Midway.
Midwayan.
Miliolite.
Moody's Branch.
Mount Selman.
Myrick.
Naheola.
Nanafalia.
Navasota.
Nummulite.
Oak Grove.
Oakville.
Ocala.
Ocheesee.
Orbitoides.
Orbitoitic.
Orbitolite.
Orthaulax.
Ostrea sellaeformis.
Palo Duro.
Pascagoula.
Peace Creek.
Queen City.
Reynosa.
Sabine River.
Shiloh.
Sopchophy.
Sparta.
St. Stephens.
Sucarnochee.
Tallahatta.
Tampa.
Timber Belt.
Tule.
Uvalde.
Vicksburg.
Vicksburgian.
Waldo.
Walnut.
Webb Bluff.
Wills Point.
Woods Bluff.
Yegua.
Zeuglodon.

Hawaii.

Pearl River.

Mexico.

Baucari.
Coatzacoalcos.
Trincheras.

Mississippi Valley.

Bloomfield.
Bluff.
Geneva.
La Grange.
Mansfield.
Orangesand.
Port Hudson.
Porters Creek.
Portland.
Quitman-Muerto.

Pacific Coast region.

Arago.
Asphalto.
Astoria.
Aturia.
Auriferous.
Bituminous.
Carmelo.
Carrizo Creek.
Chehalis.
Chico.
Coaledo.
Contra Costa.
Ellensburg.
Empire.
Ione.
John Day.
Johnson.
Kettleman.
Kittitas.
Little Vein.
Merced.
Miohippus.
Mojave.
Monterey.
Mytilus.
Oakland.
Ocoya Creek.

TERTIARY—continued.

Paso Robles.
Pescadero.
Puget.
San Diego.
San Pablo.
Santa Clara.
Sespe.
Similkameen.
Superjacent.
Swauk.
Tassagara.
Tejon.
Ticholeptus.
Torregon.
Tunnel Point.
Tuscan.
Tyre.
Roslyn.
Umpqua.
Wallala.
Wilbur.
Wildcat.

Rocky Mountain region.

Alnwick.
Arapahoe.
Bates Hole.
Bozeman.
Brontotherium.
Brown.
Browns Park.
Canyon.
Canyon City.
Coryphoden.
Cripple Creek.
Cuchara.
Deep River.
Denver.
Florissant.
Fort Ellis.
Fort Union.
Galisteo.
High Park.
Huerfano.
Intermediate.
Judith River.
Laramie.
Loup Fork.
Loup River.
Monument Creek.
North Park.
Nussbaum.
Oreodon.
Payette.
Pinon.
Pliohippus.
Poison Canyon.
Potosi rhyolite series.
Procamelus.
Puerco.
San Juan.
San Miguel.
Santa Fe.
Smith River.
Sphinx.
Sweetwater.
Titanotherium.
Wahsatch.
Washakie.
West Elk.
Wind River.
Wyoming.

Southwestern region.

Arkadelphia.
Basal.
Bingen.
Blanco.
Blanco Canyon.
Camden.
Cleveland County.
Cooks Mountain.
Fort Selden.
Hueco.
Lapara.
Llano Estacado.
Marks Mills.
Plateau.
White Bluff.

West Indies.

Antiguan.
Bowdan.
Cambridge.
Caroni.
Catadupa.
Chapelton.
Cobre.
Guallava.
Limon.
Manchionell.
Manzanilla.
Maruga.
Matanzas.
May Pen.
Moneague.
Moruga.
Naparima.
Nariva.
Oceanic.
Parian.
Pepino.
Porus.

CRETACEOUS.

Alaska.

Holikunk.
Kolmakof.
Matanuska.
Mission Creek.
Oklune.
Orca.
Tordrillo.

Appalachian region.

Brownstown.
Eagle.
Lisbon.
Marietta.

Atlantic Coast region.

Albirupean.
Amboy.
Aquia Creek.
Baltimorean.
Clay.
Eutaw.
Fish House.
Hazlet.
Island.
James River.
Lincoln.
Magothy.
Manasquan.
Marl.
Matawan.
Monmouth.
Mount Vernon.
Navesink.

CRETACEOUS—continued.

Patapsco.
Pedee.
Potomac.
Potters.
Rancocas.
Rappahannock.
Raritan.
Redbank.
Sand Hill.
Sassafras River.
Severn.
Sewell.
Vincentown.
Woodbridge.

Canada.

Belly River.
Clearwater.
Crosswicks.
Dunvegan.
Edmonton.
Fort St. John.
Grand Rapids.
Jackass Mountain.
Komooks.
Kootanie.
La Biche.
Loon River.
Nanaimo.
Nicollet.
Odanah.
Paskapoo.
Pelican.
Porcupine.
Queen Charlotte.
Quesnel River.
St. Marys.
Smoky River.
Tar.
Wapiti.
Willow Creek.

Great Basin region.

Bear River.
Black Butte.
Bluegate.
Golden Wall.
Henry's Fork.
Hogback.
Masuk.
Salt Wells.
Sulphur.
Tu-nunk.

Great Plains region

Arickaree.
Bad Land.
Barrett.
Belvidere.
Benton.
Beulah.
Black Hill.
Blue Cut.
Blue Hill.
Champion.
Cheyenne.
Corral.
Downs.
Elk Creek.
Fence-post.
Fort Hays.
Fort Pierre.
Fort Union.
Fullington.
Greenleaf.
Hay Creek.
Kiowa.
Kirby.
Lanphier.
Medicine.
Mentor.
Neocomian.
Oak Creek.
Osborne.
Platte.
Reeder.
Smoky Hill.
Stokes.
Trego.
Victoria.

Greenland.

Atane.
Kome.
Patoot.

Gulf States.

Arenaceous group.
Arietna.
Bayou Chicot.
Calcareous.
Coffee sand.
Prairie Bluff.
Ripley.
Tombigbee.
Tuscaloosa.
Winfield.

Mexico.

Cantera.
Timpas.
Todos Santos.

Mississippi Valley.

Fort Dodge.
Glauconitic.
Green sand.
Inoceramus.
Nishuabotany.
Rockville.
Rotten.
Woodbury.

Pacific Coast region.

Chico.
Chico-Tejon.
Foraminiferal.
Franciscan.
Golden Gate.
Horsetown.
Knoxville.
Mesa.
Myrtle.
Puget.
Radiolarian.
San Francisco.
Shasta.
Shasta-Chico.
Similkameen.
Suisure.
Superjacent.
Tejon.
Whitsett.
Winthrop.

Rocky Mountain region.

Animas River.
Apishapa.
Arapahoe.
Bull Mountain.
Canyon City.
Carlile.
Cascade.
Ceratops.

CRETACEOUS—continued.

Colorado.
Cretaceous Nos. 1, 2, 3.
Dakota.
Estuary.
Fort Benton.
Fox Hills.
Graneros.
Great Falls.
Green Mountain.
Greenhorn.
Halymenites.
Laramie.
Livingston.
Mancos.
Mesa Verde.
Middle Park.
Montana.
Niobrara.
Ohio Creek.
Pictured Cliff.
Pierre.
Piñon Mesa.
Point of Rocks.
Pteranodon.
Puerco.
Ruby.
Saliferous.
San Miguel.
Trinidad.
Yellowstone.

Southwestern region.

Anacacho.
Anoma.
Austin.
Big Decipher.
Black Prairie.
Bosque.
Buda.
Caprina.
Caprotina.
Chalky.
Choctaw.
Clark County.
Comanche.
Comanche Peak.
Comet Creek.
Coquina.
Dallas.
Danville.
Delrio.
Denison.
Dexter.
Dinosaur.
Duck Creek.
Eagle Ford.
Eagle Pass.
Edwards.
Escondido.
Etholen.
Exogyra arietina.
Exogyra costata.
Exogyra ponderosa.
Flag.
Fort Worth.
Fredericksburg.
Georgetown.
Gillespie.
Glen Rose.
Goodland.
Goodnight.
Grand Prairie.
Grayson.
Gulf.
Kiamitia.
Lower Cross Timbers.
Main Street.
Malone.
Marl Brook Columbus.
Navarro.
Nerinæa.
North Denison.
Paluxy.
Paw Paw.
Pinto.
Ponderosa.
Preston.
Pulliam.
Quitman.
Red River.
Requienia.
Richland-Gordon.
Rocky Comfort.
Shoal Creek.
Taylor.
Texana.
Texanan.
Timber Creek.
Travis Peak.
Trinity.
Tucumcari.
Upson.
Val Verde.
Vicarya.
Vola.
Walnut.
Washita.
Webberville.
Yucca.

West Indies.

Ballard.
Blue Mountain.
Frankenfield.
Jerusalem.
Logie Green.
Minbo.
Yallahs.

JURATRIAS.

Alaska

Naknek.
Skwentna.
Terra Cotta.

Atlantic Coast region

Albirupian.
Arundel.
Baltimorean.
Boscabel.
Brunswick.
Chesterfield.
Chicopee.
Connecticut River.
Granby.
Gwynedd.
Lansdale.
Lockatong.
Long Meadow
Mount Toby.
New Red.
Newark.
Otterdale.
Patuxent.
Perkasie.
Pleurocoelus.
Potomac.

JURATRIAS—continued.

Pottstown.
Red sand rock.
Seneca.
Stockton.
Sugarloaf.
Trap Tuff.
Tuckahoe.
Vinita.

Canada.

Nicola.
Vancouver.

Great Basin region.

Flaming Gorge.
Gray Cliff.
Koipato.
Shinarump.
Star Peak.
Vermilion.

Mexico.

Barranca.

Mississippi Valley.

Merom.

Pacific Coast region.

Auriferous slate.
Bicknell.
Cedar.
Foreman.
Franciscan.
Golden Gate.
Hardgrave.
Hinchman.
Hosselkus.
Mariposa.
Milton.
Mineral King.
Monte de Oro.
Mormon.
Pitt.
Radiolarian.
Sailor Canyon.
Santa Anna.
Swearinger.
Thompson.
Trail.

Rocky Mountain region.

Atlantosaurus.
Baptanodon.
Como.
Dolores.
Ellis.
Gunnison.
La Plata.
McElmo.
Meekoceras.
Morrison.
Pentacrinus.
Red.
Shirley.
Sundance.
Teton.
Unkpaps.
Wingate.
Wyoming.
Zuni.

Southwestern region.

Bend.
Dockum.
Lista Blanca.
Malone.
Norristown.

PERMIAN.

Appalachian region.

Dunkard Creek.

Great Plains region.

Abilene.
Alma.
Amphitheatre.
Big Basin.
Big Blue.
Browntown.
Cave Creek.
Cedar Hills.
Chapman.
Chase.
Cimarron.
Clear Fork.
Cottonwood.
Curzon.
Day Creek.
Dog Creek.
Double Mountain.
Dry Bone.
Flint.
Flint Hill.
Flower-pot.
Forest City.
Fort Riley.
Geronimo.
Geuda.
Glass Mountain.
Harpers.
Jenkins.
Kiger.
Kingfisher.
Manhattan.
Marietta.
Marion.
Medicine Lodge.
Neosho.
Red Bluff.
Salt Fork.
Salt Plain.
Shimer.
Sumner.
Taloga.
Wellington.
Wichita.
Wreford.

CARBONIFEROUS.

Alaska.

Cape Beaufort.
Tachatna.
Tahkandit.
Wellesley.

Appalachian region.

Alleghany River.
Alton.
Ames.
Anderson.
Anthracite.
Bakerstown.
Bangor.
Barren.
Barton.

CARBONIFEROUS—continued.

Bayard.
Bearwallow.
Beaver River.
Bedford.
Bee Spring.
Bellton.
Benezette.
Berea.
Big Clifty.
Big Injun.
Black Hand.
Blacksville.
Blackwater.
Birmingham.
Bluefield.
Bluestone.
Bolivar.
Bonair.
Bradford.
Braxton.
Breathitt.
Briceville.
Broad Top.
Browntown.
Brush Creek.
Buffalo.
Buhr.
Butler.
Cairo.
Cambridge.
Canaan.
Canal.
Cannelton.
Caseyville.
Cassville.
Charleston.
Clarion.
Clark.
Clarksburg.
Cleveland.
Coal measures.
Colvins Run.
Conemaugh.
Conglomerate.
Connellsville.
Connoquenessing.
Corbin.
Corry.
Crawford.
Crinoidal.
Curlew.
Cussewago.

Cuyahoga.
Dismal.
Dotson.
Eagle.
Elk Lick.
Elk River.
Elkgarden.
Erie.
Ewuing.
Fairfax.
Fayette.
Federal Creek.
Ferriferous.
Fish Creek.
Fishpot.
Flint Ridge.
Floyd.
Fort Payne.
Freeport.
Frostburg.
Gallitzen.
Garland.
Gilmore.
Gladeville.
Great.
Great Conglomerate.
Green County.
Greenbrier.
Griswold Gap.
Harlan.
Hartselle.
Hinton.
Homewood
Horsepen.
Iowa.
Irondale.
Johnson River.
Johnstown.
Jollytown.
Kanawha.
Kanawha Falls.
Kinzua.
Kittanning.
Lauderdale.
Lee.
Lehigh.
Leitchfield.
Licking.
Logan.
Lookout.
Lower Green.
Macksburg.

Madisonville.
Mahoning.
Marvin Creek.
Massilon.
Mauch Chunk.
Maxville.
Meadeville.
Mercer.
Middle Conglomerate.
Mill Creek.
Millstone.
Monongahela River.
Morgantown.
Mount Morris.
Mount Pleasant.
Mount Sand.
Mountain.
New River.
Newman.
Newtonville.
Nineveh.
Norton.
Oil Creek Lake.
Oil Lake.
Olean.
Olive.
Orangeville.
Oxmoor.
Panther Creek.
Pennington.
Pennsylvanian.
Pickens.
Pine Creek.
Pine Mountain.
Pithole.
Pittsburg.
Pocahontas.
Pocono.
Pomeroy.
Ponent.
Pottsville.
Powelton.
Price.
Princeton.
Productive.
Pulaski.
Putnam Hill
Quakertown.
Quinnemont.
Raccoon.
Raleigh.
Redstone.

CARBONIFEROUS—continued.

Riceville.
Royal.
Rushville.
Saltsburg.
Sand Mountain.
Savage.
Schreyfogels.
Scott.
Scotts Creek.
Sequoyah.
Seral.
Sewanee.
Sewell.
Sewickley.
Sharon.
Sharpsville.
Shawnee.
Shenango.
Shinersville.
Siliceous.
South Carrolton.
Subconglomerate.
Sunbury.
Tar Spring.
Tellowa.
Tionesta.
Trough Creek.
Tuscumbia.
Umbral.
Uniontown.
Upshur.
Vanport.
Venango.
Verdi.
Vespertine.
Walden.
Wartburg.
Washington County.
Waverly.
Waynesburg.
Welch.
White.
Wildcat Mountain.
Windy Gap.
Wise.
Wyoming Valley.
Zoar.

New England.

Aquidneck.
Attleboro.
Coasters Harbor Island.
Conanicut.
Cranston.
Kingstown.
Millers River.
Natick.
Pawtucket.
Pelham.
Pondville.
Purgaton.
Rose Island.
Roxbury.
Sachuest.
Sockanosset.
Sukonk.
Tenmile River.
Tiverton.
Wamsutta.

Canada.

Albert.
Banff.
Bonaventure.
Cache Creek.
Campbell Creek.
Cape John.
Cascade.
Hopewell.
Marble Canyon.
Mertgomist.
New Glasgow.
Perry.
Pictou.
Portland.
Riversdale.
Smalls Brook.
Smelt Brook.
Stellarton.
Union.
Windsor.
Woodstock.

Great Basin region.

Aubrey.
Godiva.
Diamond Peak.
Humbug.
Lodore.
Mammoth.
Red Wall.
Wahsatch.
Weber.

Great Lakes region.

Coldwater.
Grand Rapids.
Marshall.
Michigan salt.
Napoleon.
Parma.
Richmondville.
Rock Falls.
Woodville.

Great Plains region.

Altoona.
Americus.
Atchison.
Auburn.
Bethany Falls.
Burlingame.
Calhoun.
Carlyle.
Cave.
Cave Rock.
Cave Spring.
Chanute.
Chase.
Cherryvale.
Cottonwood.
Cottonwood Falls.
Deer Creek.
Douglas.
Dover.
Dun.
Dunlap.
Earlton.
Einstine.
Elgin.
Elk Falls.
Elmont.
Emporia.
Falls River.
Florence.
Fort Scott.
Garnett.
Gypsum.
Hartford.
Howard.
Iola.
Labette.
Lane.
Le Compton.
Le Roy.

CARBONIFEROUS—continued.

Marion.
Marmaton.
Maryville.
Neodesha.
Oread.
Osage.
Osage City.
Oswego.
Ottawa.
Pawnee.
Plattsburg.
Pleasanton.
Pottawatomie.
Robinett.
Rossville.
Sea Urchin.
Severy.
Shunganunga.
Silver Lake.
Soldier Creek.
Spring Rock.
Stanton.
Strong.
Swallow.
Syntrialasina.
Tecumseh.
Thayer.
Topeka.
Toronto.
Victoria.
Vilas.
Wabaunsee.
Wakarusa.
Well Rock.
Willard.
Winfield.

Mississippi Valley.

Anvil Rock.
Appanoose.
Archimedes.
Ardmore.
Augusta.
Aux Vases.
Baden.
Bevier.
Bituminous.
Burlington.
Carlinville.
Chaelites.
Chariton.
Cherokee.
Chester.
Chouteau.
Clepsydrops.
Collinsville.
Concretionary.
Cooper.
Coxville.
Cypress.
Dekalb.
Earlham.
Encrinital.
English River.
Ferruginous.
Forbes.
Fragmental.
Fusulina.
Geode.
Goniatite.
Grand River.
Graydon.
Graydon Springs.
Hanging Rock.
Hannibal.
Harrodsburg.
Henrietta.
High Rock.
Jonesboro.
Kansas City.
Kaskaskia.
Keokuk.
Keosauqua.
Kinderhook.
Knob.
Knobstone.
Lady Washington.
Lagonda.
Lawrence.
Lawrence-Crawford.
Le Grand.
Lithographic.
Livingston.
Louisiana.
Macon City.
Mansfield.
Maple Hill.
Marais des Cygnes.
Marshalltown.
Merom.
Miller.
Mississippian.
Missouri.
Missourian.
Mitchell.
Moberly.
Monroe-Harrison.
Mound Valley.
North Vernon.
Orange Martin.
Nodaway.
Parkville.
Pella.
Platte.
Plattsmouth.
Pottery.
Productal.
Quarry Creek.
Quitman.
Redrock.
Rhomboidal.
Riverside.
Rock Creek.
Rockcastle.
Rockford.
St. Genevieve.
St. Joe.
St. Louis.
Salem.
Spring River.
Springvale.
Summit.
Thomas Hill.
Unionville.
Warrensburg.
Warsaw.
Wassonville.
West Franklin.
Westerville.
Weston.
Winterset.
Wyckoff.

Pacific Coast region.

Baird.
Bed Rock.
Blue Canyon.
Calaveras.
Cape Horn.
Clipper Gap.
Delhi.
Eureka.
Little Grizzly Creek.
McCloud.
Martinez.
Pitt.
Relief.
Robinson.
Shoo Fly.

Rocky Mountain region.

Arkansas.
Badito.

CARBONIFEROUS—continued.

Blue.
Castle.
Eryops.
Fountain.
Hermosa.
Kibbey.
Leadville.
Madison.
Maroon.
Millsap.
Monarch.
Otter.
Otter Creek.
Paine.
Quadrant.
Rico.
Wood River.
Woodhurst.

Southwestern region.

Adams Branch.
Albany.
Antelope Creek.
Appleton.
Atoka.
Batesville.
Bead Mountain.
Belva.
Bend.
Big Valley.
Boggy.
Boone.
Booneville.
Boston group.
Brown Creek.
Brownwood.
Buffalo Creek.
Bull Creek.
Burnet Branch.
Camp Colorado.
Camp Creek.
Campophyllum.
Canyon.
Carrollton.
Cavaniol.
Cedarton.
Chaffin.
Cherry.
Cisco.
Coleman.
Coon Mountain.
Cottonwood Creek
Cross Plains.
Elliott Creek.
Elm Creek.
Fayetteville.
Fox Ford.
Frickham.
Genevieve.
Granville.
Grape Creek.
Greenwood.
Hanna Valley.
Hartshorne.
Hartwell.
Hog Creek.
Home Creek.
Hordes Creek.
Horse Creek.
Indian Creek.
Jagger Bend.
Kessler.
Lohn.
Lost Creek.
Lynch Creek.
McAlester.
Milburn.
Milburn-Strawn.
Norristown.
Novaculite.
Paint Rock.
Parks Mountain.
Pawhuski.
Pentremital.
Poteau.
Richland.
Ricker.
Rochelle.
Rough Creek.
Russellville.
Saddle Creek.
Santa Anna.
Savanna.
Sebastian.
Shadrick Mill.
Shoal Creek.
Spadra.
Speck Mountain.
Spring Creek.
Stockwether.
Strawn.
Sylamore.
Talpa.
Thurman.
Tomlinson.
Valera Bend.
Waldrip.
Washburn.
Washington.
Watts Creek.
Wilbarger Creek.
Wyman.

DEVONIAN.

Alaska.

Tachatna.
Tahkandit.
Wellesley.
West Fork.

Appalachian region.

Allegrippus.
Becraft.
Bellvale.
Bernardston.
Black shale.
Blossburg.
Burlington.
Cadent.
Camden.
Cardiola.
Cascade.
Cashaqua.
Catskill.
Cauda-Galli.
Chapman.
Chattanooga.
Chautauquan.
Chemung.
Cherry Ridge.
Cleveland.
Coeymans.
Columbus.
Corniferous.
Cuboides.
Delaware.
Dellville.
Dorset.
Elk.
Elk Mountain
Ellicottsville.
Encrinal.
Erian.
Erie.
Esopus.
Falls Creek.

DEVONIAN—continued.

Flagstone.
Frog Mountain.
Gardeau.
Genesee.
Girard.
Grainger.
Great Bend.
Green Pond.
Hamilton.
Helderberg.
Helderbergian.
Honesdale.
Hosmer.
Ithaca.
Jennings.
Kimberling.
Kings Mill.
Lackawaxen.
Leboeuf.
Little Genesee
Louisville.
Ludlowville.
McKean.
Manlius.
Marcellus.
Monteballo.
Monterey.
Montrose.
Moscow.
Mount Pleasant.
Naples.
New Milford.
New Scotland.
Nunda.
Ohio.
Old Red.
Olentangy.
Oneonta.
Onondaga.
Oriskany.
Panama.
Panola.
Perry.
Peru.
Ponent.
Portage.
Postmedidial.
Romney.
Salamanca.
Sandusky.
Schoharie.
Scioto.
Selinsgrove.
Seneca.
Senecan.
Sherburne.
Skaneateles.
Skunnemunk.
Stafford.
Starucca.
Stony Brook.
Stormville.
Styliolina.
Sweetland.
Tentaculite.
Towanda.
Tully.
Tuna.
Ulsterian.
Venango.
Vergent.
West Jefferson.
Wolf Creek.

Canada.

Bloomsbury.
Gaspe.
Intermediate.
Kingston.
Lambton.
Little River.
Manitoban.
Mispec.
Winnipegosan.

Great Basin region

Nevada.
Ogden.
Temple Butte.
White Pine.

Great Lakes region.

Dundee.
Little Traverse Bay.
St. Clair.
Thunder Bay.
Traverse.

Mississippi Valley.

Brown.
Bunker Hill.
Callaway.
Cedar Valley.
Clear Creek.
Davenport.
Delphi.
Fayette.
Grand Tower.
Grassy Creek.
Gyroceras.
Hackberry.
Hannibal.
Huron.
Independence.
Kenwood.
Kinderhook.
King.
Lime Creek.
Louisian.
Louisville-Delphi.
Montpelier.
New Albany.
New Providence.
North Vernon.
Otis.
Phelps.
Riverside.
Rockford.
Sac.
Sellersburg.
Shelby.
Snyder Creek.
Spirifera pennata.
State Quarry.
Sylamore.
Vernicular.
Walker Block.
Wapsipinicon.
Warren.

New England.

Moose Island.
Moose River.
Newport.
Paupack.

Pacific Coast region.

Arlington.
Kennett.
Sacramento.

Rocky Mountain region.

Jefferson.
Monarch.
Ouray.
Parting.
Three Forks.

Southwestern region.

Eureka.

SILURIAN.

Appalachian region.

Athens.
Barree.
Bastard.
Bays.
Beavertown.
Bloomfield.
Bloomsburg.
Blue.
Blue Shell.
Bossardville.
Bridgeport.
Cacapon.
Cedarville.
Clarkes Mill.
Cliff.
Clinch.
Clinch Mountain.
Clinton.
Cove.
Crab Orchard.
Cumberland.
Damourite.
Dayton.
Decker Ferry.
Delthyris.
Dyestone.
Garrard.
Giles.
Grand Rapids.
Green Pond.
Hampshire.
Hancock.
Harpeth.
Helderberg.
Highbridge.
Hillsboro.
Holland.
Hydraulic.
Juniata.
Levant.
Lewistown.
Lexington.
Longwood.
Lowville.
McCoytown.
Manlius.
Massanutten.
Medina.
Meniscus.
Meridian.
Mifflintown.
Moccasin.
Monclova.
Monterey.
Montgomery.
Neeleytown.
Niagara.
Niagaran.
Oneida.
Onondaga.
Oswegan.
Oswego.
Panola.
Pentamerus.
Postmeridian.
Poxono Island.
Pre-Meridian.
Primedidial.
Proteau.
Red Mountain.
Rensselaer.
Rockwood.
Rondout.
Salina.
Salmon River.
Scalent.
Scutella.
Shawangunk.
Siliceous.
Sneedville.
Springfield.
Stormville.
Surgent.
Taylors Ridge.
Tellico.
Tuscarora.
Tymochtee.
Waldron.
Waterlime.
West Union.
White Oak Mountain.

Canada.

Anticosti.
Arisaig.
Bertie.
Cayuga.
Cobequid.
Gaspe.
Guelph.
Halysites.
Mascarene.

Great Basin region.

Eureka.
Lone Mountain.

Great Lakes region.

Byron.
Coralline.
Gray.
Mayville.
Monroe.
Racine.
Sylvania.
Waukesha.

Mississippi Valley.

Anamosa.
Bertram.
Bowling Green.
Cape Girardeau.
Clear Creek.
Coggan.
Coral.
Glencoe.
Gower.
Grand Tower.
Joliet.
Laurel.
Le Claire.
Noix.
Osgood.

New England.

Amherst.
Aroostook.
Ashland.
Bellowspipe.
Brimfield.
Cobscook.
Greylock.
Sheridan.
Vinal Haven.
Whitmores Ferry.

Pacific Coast region.

Grizzly.
Taylorsville.

Rocky Mountain region.

Parting.
White.
Yule.

SILURIAN—continued.

Southwestern region.

Beaver.
Burnet.
Cason.
Deep Creek.
Glens Falls.
Hinton.
Hoover.
Izard.
Leon.
St. Clair.
San Saba.
Wyo.

ORDOVICIAN.

Appalachian region.

Auroral.
Avondale.
Barnegate.
Beekmantown.
Belfast.
Berkshire.
Bird Mountain.
Birdseye.
Black River.
Calciferous.
Canadian.
Capitol.
Carters Creek.
Central.
Champlain.
Chazy.
Chester Valley.
Chickamauga.
Cincinnati.
Codorus.
College Hill.
Conasauga.
Dayton.
Eolian.
Everett.
Flanagan.
Fossiliferous.
Frankfort.
Glade.
Hudson.
Hudson River.
Inwood.
Isle Lamotte.
Kentucky.
Knox.
Lancaster.
Lebanon.
Lenoir.
Lorraine.
Manhattan.
Martinsburg.
Matinal.
Moduria.
Mohawk.
Mohawkian.
Nashville.
Normandy.
Ontarian.
Ontaric.
Ontario.
Peach Bottom.
Pelham.
Pierce.
Point Pleasant.
Ridley.
Rochdale.
Rockmart.
Sevier.
Shenandoah.
Siliceous.
Sparry.
Stones River.
Trenton.
Utica.
Wappinger Valley.
Westfield.
Whateley.
Winchester.

Canada.

Cat Head.
Citadel.
Farnham.
Lauzon.
Levis.
Marsouin.
Mottled.
Phillipsburg.
Quebec.
St. Jean.
Winnipeg.

Great Basin region.

Pogonip.
Ute.

Great Lakes region.

Bluff.
Eastern.
Elevator.
Jordan.
Lake Superior.
St. Croix.
St. Lawrence.
St. Peters.

Mississippi Valley.

Beloit.
Bryant.
Buff.
Buffalo.
Cap-au-Grés.
Charette.
Crystal.
Folley.
Galena.
Girardeau.
Joachim.
McCum.
Magnesian.
Maquoketa.
Marble.
Marble Hill.
Receptaculites.
Richmond.
St. François.
St. Thomas.
Sandstone.
Shakopee.
Thebes.
Willow River.
Wykoff.

New England.

Canaan.
Chester.
Conway.
Egremont.
Goshen.
Granville.
Hardwick.
Hawley.
Hoosac.

ORDOVICIAN—continued.

Leyden.
Riga.
Rowe.
Savoy.
Mount Washington.
Waterville.

Rocky Mountain region.

Fremont.
Harding.
Madison.
Manitou.

Southwestern region.

Macluria.
Polk Bayou.
Rainy Mountain.
Saccharoidal.
St. Clair.

CAMBRIAN.

Appalachian region.

Aldrich.
Antietam.
Apison.
Ashley Hill.
Beaver.
Chikis.
Chilhowee.
Chiques.
Cochran.
Cohulta.
Coosa.
Deer Creek.
Graysonton.
Hampton.
Hardistonville.
Harpers.
Harpers Ferry.
Hellem.
Hesse.
Honaker.
Kentucky.
Knox.
Loudon.
Maryville.
Montevallo.
Murray.
Nebo.
Nichols.
Nolichucky.
North Valley Hill.
Oostanala.
Potsdam.
Primal.
Reading.
Rogersville.
Rome.
Russell.
Rutledge.
Sandsuck.
Shenandoah.
South Valley Hill.
Starr.
Unicoi.
Wallkill.
Wappinger Valley.
Weisner.
Weverton.
Wiltons Run.
York.

Canada.

Acadian.
Adams Lake.
Athabasca.
Barachois.
Belle Isle.
Bow River.
Bretonian.
Castle Mountain.
Churchill.
Copper-bearing.
Etcheminian.
Johannian.
Kaministiquia.
Nisconlith.
Phillipsburg.
Pointe Levis.
Quebec.
St. John.
Selkirk.
Sillery.

Great Basin region.

Hamburg.
Prospect Mountain.
Secret Canyon.
Tintic.
Tonto.

Great Lakes region.

Eastern.
Eau Claire.
Fond du Lac.
Hermansville.
Keweenawan.
Lake Superior.
Mendota.

Mississippi Valley.

Cole Camp.
Crystal City.
Dresbach.
Elevator B.
Fredericktown.
Gasconade.
Grand Portage.
Gritstone.
Hinckley.
Jordan.
La Motte.
Le Seur.
Moreau.
New Richmond.
Pipestone.
Pokegama.
Potosi.
Proctor.
Puckwunge.
Roubidoux.
St. Croix.
St. François.
St. Joseph.
St. Lawrence.
Waswangoning.
Western.
White River.

New England.

Becket.
Berkshire.
Cheshire.
Coos.
Dalton.
Eolian.
Georgia.
Granular.
Kendall Green.
Lincoln.

CAMBRIAN—continued.

Lingua.
Little Compton.
Monson.
Nahant.
Newport Neck.
Pelham.
Poughquag.
Quartzrock.
St. Albans.
Stockbridge.
Stony Brook.
Swiftwater.
Taconic.
Taconyte.
Vermont.
Winooski.

Rocky Mountain region.

Barker.
Dry Creek.
Flathead.
Gallatin.
Meagher.
Park.
Pilgrim.
Sawatch.
Yogo.

Southwestern region.

Blue Creek.
Hickory.
Katemcy.
Ozark.
Riley.

ALGONKIAN.

Appalachian region.

Catoctin.
Citico.
Courtland.
Edison.
Franklin.
Hamburg Mountain.
Hazel.
Hemlock.
Losee Pond.
Manhattan.
Monroe.
Pigeon.
Sandpond.
Taconic.
Talladega.
Thunderhead.
Wilhite.

Canada.

Anorthosite.
Aspidella.
Avalon.
Conception.
Huronian.
Kaministiquia.
Kingston.
Momable.
Ontarian.
Random.
Signal Hill.
Thessalon.
Torbay.

Great Lakes region.

Ajibik.
Antoine.
Baraboo.
Bijiki.
Black River Falls.
Bohemia.
Bone Lake.
Chippewa.
Clarksburg.
Eastern.
Felch Mountain.
Goodrich.
Groveland.
Hanbury.
Ishpeming.
Kona.
Mansfield.
Maquethian.
Marquette.
Marquette-Menominee.
Marquettian.
Menominee.
Mesnard.
Michigamme.
Mount Mesnard.
Negaunee.
Ogishke.
Penokee.
Penokee-Gogebic.
Quartz slate.
Randville.
St. Louis.
Siamo.
Stuntz.
Sturgeon.
Thompson.
Vulcan.
Wewe.

Great Basin region.

Chuar.
Grand Canyon.
Unkar.
Vishnu.

Mississippi Valley.

Pilot Knob.
Sioux.

New England.

Ashton.
Blackstone.
Coles Brook.
Cumberland.
East Lee.
Goose Pond.
Hinsdale.
Hop Brook.
Kearsarge.
Mendon.
Merrimack.
Mount Holly.
Rockingham.
Smithfield.
Stamford.
Tyringham.
Washington.
White Mountain.

Rocky Mountain region.

Belt.
Chamberlin.
Cherry Creek.
Empire.
Greyson.
Helena.
Marsh.
Neihart.
Newland.
Salida.
Sheridan.
Spokane.

Southwestern region.

Llano.
Mason.
Packsaddle.
Texan.
Texian.

ARCHEAN.

Appalachian region.

Broad Branch.
Chestnut Hill.
Highland.
Manayunk.
Orchard.
Piedmont.
Pochuck.
South Mountain.

Canada.

Arvonian.
Atic Oban.
Coast.
Coastal.
Coldbrook.
Coutchiching.
Dore.
Grenville.
Hastings.
Huronian.
Kingston.
Laurentian.
Norian.
Quesnel Lake.
Shuswap.
Steep Rock.

Great Lakes region.

Animikie.
Clover Canyon.
Glacian.
Holyoke.
Kewatin.
Keweenawan.
Keweenian.
Kewenan.
Kitchi.
Mareniscan.
Minnesota River Valley.
Mona.
Necedah.
Ophian.
Palmer.
Pelodian.
Porphyrian.
Portland.
Quinnesec.
Republic.
Siderian.
Vermilion.
Waterloo.

Mexico.

Volcan.

New England.

Atlantic.
Franconia.
Greylock.
Labrador.
Labradorian.
Lake Winnepesaukee.
Lisbon.
Lyman.
Montalban.
Pemigewassett.
Pequawket.
Terranovan.
Worcester.

Southwestern region.

Bodeville.
Burnetan.
Click.
Fernandan.
Long Grove.
Long Mountain.
Iron Mountain.
Valley Spring.

FORMATIONS OF UNDETERMINED AGE.

Alaska.

Bettles.
Birch Creek.
Bristol Bay.
Cantwell.
Copper River.
Fortymile.
Greenstone.
Klondike.
McCarthy Creek.
Nasina.
Nilkoka.
Nutzotin.
Rampart.
Rapids.
Shushitna.
Sunrise.
Tanana.
Valdes.

Appalachian region.

Bridgeton.
Buncombe.
Cades.
Cherokee slates.
Clingman.
Cockeysville.
Conshohocken.
Cortlandt.
Eaton.
Fairmount.
Frankford.
Kennett.
Kings Mountain.
Linnville.
Moose Hide.
New York.
Ocoee.
Oswegatchie.
Peach Bottom.
Pope Hollow.
Setters.
Yonkers.

Canada.

Anderson River.
Boston Bar.
Caribou.
George River.
Hunker.
Indian River.
Manitonnuck.
Menevian.
Mott Haven.
Nechacco.
Nipigon.
Sault St. Mary.

Great Basin region.

Arizonian.
Mesa.
Red Creek.

Great Lakes region.

Cupriferous.
L'Anse.
Logan.
Mackinac.
New Ulm.

FORMATIONS OF UNDETERMINED AGE—continued.

Pewabic.
Point aux Gres.
Trappean.

Mississippi Valley.

Brownsville.
Cannelton.
Flat Rock.
Fort Knox.
Geneva.
Golconda.
Grandad.
Greensburg.
Harris City.
Hawpatch.
Hindostan.
Huntingdon.
Lake Huron.
Lamont.
Lost River.
Pendleton.
Pine Creek.
Putnamville.
St. Anthony.
Sedalia.
Williamsport.

New England.

Bar Harbor.
Bartletts Island.
Blanford.
Bolton.
Calderwood Neck.
Cambridge.
Chitistone.
Chloritic.
Cranberry Island.
Greenwich.
Klutena.
Kotlo.
Lake.
Mapleton.
Phipsburg.
Schooner Head.
Suttons Island.
Swanton.
Taunton.
Winnepesaukee.

Pacific Coast region.

Tolenas.
Ventura.

Rocky Mountain region.

Minnelusa.
Nampa.

Southwestern region.

Plymouth.
Polk County.

West Indies.

Caribbean.

SEDIMENTARY FORMATION NAMES.

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Carboniferous. Pennsylvania.

Ballard, Hill. Harvard Coll. Mus. of Comp. Zool., Bull., vol. xxxiv, p. 42. 1899.
Cretaceous. Jamaica. Included in Blue Mountain series.

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Jurassic? Maryland.

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Cretaceous. Maryland. Part. syn. Potomac (?).

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Carboniferous. Canada. Included in Lower Carboniferous or possibly Upper Devonian. Includes Upper Banff shales, Upper Banff limestone, Lower Banff shales, Lower Banff limestone. Exact Syn. Banff limestone.

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Carboniferous. Alabama, Tennessee. Exact Syn. Mountain limestone.

Bangor limestone, Hayes. Ala. Geol. Surv., Bull., no. iv, p. 48. 1892.
Carboniferous. Alabama. Included in Mississippian series.

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Carboniferous. Georgia, Tennessee, Alabama.

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Carboniferous. Alabama. Included in Lower Carboniferous.

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Carboniferous. Alabama. Included in Upper Sub-Carboniferous.

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Jurassic. Wyoming.

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Algonkian. Lake Superior region. Included in Huronian.

Baraboo quartzite, Crosby. Geol. Soc. Am., Bull., vol. x, p. 162. 1899.
Cambrian? Wisconsin.

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Algonkian. Wisconsin. Included in Upper Huronian.

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Cambrian. Nova Scotia.

Barbican, Hill. Harvard Coll. Mus. of Comp. Zool., Bull., vol. xxxiv, p. 42. 1899.
Pleistocene. Jamaica. Included in Coastal series.

Bar Harbor series, Shaler. U. S. Geol. Surv., 8th Ann. Rept., pt. ii, p. 1047. 1889.
Maine.

Barker formation, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 55, 56. 1899.
Cambrian. Montana. Part. syn. Flathead and Gallatin formations.

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New York.

Barnegat limestone, Mather. Geol. of N. Y., pt. i, pp. 410–412. 1843.
Silurian. New York. Included in Calciferous group.

Barnstable series, Shaler. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, pp. 539–541. 1898.
Pleistocene? Massachusetts. Included in Cape Cod series.

Barranca division, Dumble. Am. Inst. Mg. Engrs., Trans., vol. xxix, p. 139. 1900.
Included in Trias. Mexico.

Barree, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 132–133. 1885.
Silurian. Pennsylvania. Exact. Syn. Niagara?

Barree group, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 825–827. 1892.
Silurian. Pennsylvania. Included in No. v, Clinton.

Barren group, Upper, Rogers. Geol. of Pa., vol. ii, p. 20 et seq. 1858.
Carboniferous. Pennsylvania.

Barren group, Lower, Rogers. Geol. of Pa., vol. ii, p. 17 et. seq. 1858.
Carboniferous. Pennsylvania.

Barren limestone, Owen. Geol. Reconn. State of Indiana, Rept. (1837), p. 22. 1859.
Indiana.

Barren group, Killebrew and Safford. Resources of Tennessee, p. 40. 1874.
Carboniferous. Tennessee. Included in Lower Carboniferous.

Barren Coal Measures, Newberry. Ohio Geol. Surv., vol. ii, p. 155. 1874.
Carboniferous. Ohio. Included in Lower Coal Measures.

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Carboniferous. West Virginia. Included in Coal Measures.

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Carboniferous. West Virginia. Included in Lower Carboniferous.

Barren group, Upper, White. Lyceum of Nat. Hist. of N. Y., Annals, vol. xi, pp. 46–57. 1876.
West Virginia, Pennsylvania.

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Carboniferous. Pennsylvania. Includes Washington and Green Counties groups.

Barren series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K, pp. 75–83. 1876.
Carboniferous. Pennsylvania. Includes Morgantown sandstone, Birmingham shale.

Barren series, Lower, White. 2d Pa. Geol. Surv., Rept. A^2, pp. 23–26. 1877.
Carboniferous. Pennsylvania.

Barren series, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K^2, pp. 25–29. 1877.
Carboniferous. Pennsylvania.

Barren series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K^2, pp. 64–72. 1877.
Carboniferous. Pennsylvania. Includes Barton group.

Barren Measures, Lower, Newberry. Ohio Geol. Surv., vol. iii, p. 723. 1878.
Carboniferous. Ohio. Included in Coal Measures.

Barren Measures, Platt. 2d Pa. Geol. Surv., Rept. H^4, pp. 167–174. 1878.
Carboniferous. Pennsylvania.

Barren series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K^3, pp. 18–26. 1878.
Carboniferous. Pennsylvania.

Barren Group, Lower, Stevenson. Ohio Geol. Surv., vol. iii, pp. 203, 221. 1878.
Carboniferous. Ohio. Included in Coal Measures.

Barren series, Lower, White. 2d Pa. Geol. Surv., Rept. Q, pp. 23–38. 1878.
Carboniferous. Pennsylvania. Includes Pittsburg limestone, Morgantown sandstone, Elk Lick limestone, Pine Creek limestone, Buffalo sandstone, Brush Creek limestone.

Barren Measures, Chance. 2d Pa. Geol. Surv., Rept. V, pp. 13–15. 1879.
Carboniferous. Pennsylvania.

Barren Measures, Platt. 2d Pa. Geol. Surv., Rept. H^5, p. 311. 1880.
Carboniferous. Pennsylvania.

Barren group, Upper, Stevenson. The Virginias, vol. ii, p. 70. 1881.
Carboniferous. West Virginia. Included in Coal Measures.

Barren group, Lower, Stevenson. The Virginias, vol. ii, pp. 98, 122. 1881.
Carboniferous. West Virginia.

Barren Measures, Lower, Platt. 2d Pa. Geol. Surv., Rept. H^6, pp. xxviii–xxix. 1881.
Carboniferous. Pennsylvania.

Barren Coal Measures, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 48 et seq. 1885.
Carboniferous. Pennsylvania.

Barren Measures, D'Invilliers. 2d Pa. Geol. Surv., Ann. Rept. 1885, pp. 177–181. 1886.
Carboniferous. Pennsylvania. Includes Connellsville and Morgantown sandstones. Crinoidal limestone No. 19.

Barren Measures, D'Invilliers. 2d Pa. Geol. Surv., Ann. Rept. 1886, pp. 74–79, 208, 265, 295–296. 1887.
Carboniferous. Pennsylvania. Exact Syn. Pittsburg series.

Barren Measures, Upper, D'Invilliers. 2d Pa. Geol. Surv., Ann. Rept. 1886, pp. 58–63, 202–206, 262–263, 234–336. 1887.
Carboniferous. Pennsylvania. Includes Green County group and Washington County group.

Barren Measures, Upper, Carll. 2d Pa. Geol. Surv., Rept. I^5, p. 122. 1890.
Carboniferous. Pennsylvania. Exact Syn. Washington County group.

Barren Measures, Lower, Carll. 2d Pa. Geol. Surv., Rept. I^5, pp. 123–125. 1890.
Includes Crinoidal limestone = Ames limestone of Ohio and West Virginia. Exact Syn. Pittsburg series.

Barren Measures, White. U. S. Geol. Surv., Bull., No. 65, p. 70. 1891.
Carboniferous. Ohio, Pennsylvania, West Virginia. Exact Syn. Elk River series.

Barren Measures, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2406–2447. 1895.
Carboniferous. Pennsylvania. Exact Syn. No. xiv, Pittsburg series, Elk River series of West Virginia.

Barren Measures, Upper, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2565–2588. 1895.
Carboniferous. Pennsylvania. Includes Green County group, Washington County group.
Exact Syns. No. xvi, Permo-Carboniferous or Dunkard Creek series.

Barrett shales, Jenney. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, pp. 568–587, 593. 1899.
Cretaceous. South Dakota. Included in Dakota group.

Barrett shales, Ward. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, p. 593. 1899.
Cretaceous. South Dakota.

Barrington clays, Woodworth. U. S. Geol. Surv., 17th Ann. Rept. pt. i, p. 987. 1896.
Pleistocene. Rhode Island.

Bartletts Island series, Shaler. U. S. Geol. Surv., 8th Ann. Rept., pt. ii, p. 1038. 1889.
Maine.

Barton group, Stevenson. 2d Pa. Geol. Surv., Rept. K^2, pp. 67–68. 1877.
Carboniferous. Pennsylvania. Included in Lower Barren series.

Basal clays, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, pp. xli–xliv. 1890.
Tertiary. Texas. Included in Eocene.

Bashi deposit, Heilprin. Phil. Acad. Nat. Sci., Jour., vol. ix, pp. 140, 144. 1884.
Tertiary. Alabama. Included in Eocene. Exact Syn. Eolignitic.

Bashi series, Smith and Johnson. U. S. Geol. Surv., Bull. No. 43, p. 43. 1887.
Tertiary. Alabama. Included in Lignitic or Lower Eocene. Exact syn. Woods Bluff series.

Bashi, Langdon. Geol. Soc. Am., Bull., vol. ii, pp. 588, 596. 1891.
Tertiary. Alabama. Included in Lower Eocene.

Bashi series, Langdon. Ga. Geol. Surv., 1st Rept. of Prog., p. 96. 1891.
Tertiary. Georgia. Exact syn. Woods Bluff series.

Bashi division, Spencer. Geol. Surv. Ga., 1st Rept. of Prog., 1890–91. 1891.
Tertiary. Georgia. Included in Lignitic.

Bashi series, Dall. U. S. Geol. Surv., 18th Ann. Rept, pt. ii, p. 345. 1898.
Tertiary. Alabama. Included in Eocene. Exact Syn. Woods Bluff series.

Bastard limestone, White. 2d Pa. Geol. Surv., Rept. G^7, pp. 97–98. 1883.
Silurian. Pennsylvania. Included in Lower Helderberg, or No. VI.

Bastard limestone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 948. 1892.
Silurian. Pennsylvania. Included in No. VI. Stormville series.

Bates Hole formation, Smith. Jour. of Geol., vol. viii, p. 456. 1900.
Tertiary. Wyoming. Included in Eocene.

Batesville sandstone, Simonds. Ark. Geol. Surv., 1888, vol. iv, pp. 49–53, 149. 1888.
Carboniferous. Arkansas. Included in Lower Carboniferous.

Batesville sandstone, Penrose. Ark. Geol. Surv., 1890, vol. i, pp. 139, 140. 1890.
Carboniferous. Arkansas. Included in Mississippian series. Osage group.

Batesville ash-bed, Williams. Ark. Geol. Surv., 1890, vol. ii, pp. 373–375. 1890.
Arkansas.

Batesville sandstone, Simonds and Hopkins. Ark. Geol. Surv., 1891, vol. ii, pp. 51–55. 1891.
Carboniferous. Arkansas. Included in Lower Carboniferous.

Batesville sandstone, Williams. Ark. Geol. Surv., Ann. Rept. for 1892, pp. 355–358. 1900.
Carboniferous. Arkansas.

Baucari division, Dumble. Am. Inst. Mg. Engrs., Trans., vol. xxix, p. 126. 1900.
Tertiary. Mexico.

Bay shot sand, Eaton. Am. Jour. Sci., 1st ser., vol. xii, p. 18. 1826.

Bayard, Darton and Taff. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 28. 1896.
Carboniferous. West Virginia, Maryland.

Bayard, Clark. Md. Geol. Surv., vol. i, p. 156. 1897.
Carboniferous. Maryland. Included in Coal Measures.

Bayard formation, Clark. Md. Geol. Surv., vol. i, p. 186. 1897.
Carboniferous. Maryland.

Bayard, Clark. Md. Geol. Surv., vol. ii, p. 170. 1898.
Carboniferous. Maryland.

Bayou Chicot limestone, Harris and Veatch. La. State Exp. Station, pt. v, p. 61. 1899.
Cretaceous. Louisiana. Included in Ripley stage.

Bays sandstone, Campbell. Geol. Soc. Am., Bull., vol. v, pp. 171, 176. 1894.
Silurian. Virginia. Included in Medina.

Bays sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 12, 26. 1894, 1896.
Silurian. Kentucky, Virginia, Tennessee.

Bays sandstone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25, 27. 1895, 1896.
Silurian. Tennessee, North Carolina.

Bays limestone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Silurian. Tennessee. Exact Syn. Bays sandstone of Loudon folio. Part. Syns. Chickamauga limestone of Kingston folio; Trenton and Nashville group of Safford.

Bays sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Silurian. Virginia, West Virginia.

Bays sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
Silurian. Virginia, Tennessee.

Beacon Hill, Salisbury. N. J. Geol. Surv., Rept. 1893, pp. 47–57, 67–72. 1894.
Pleistocene. New Jersey. Included in Yellow gravel.

Beacon Hill formation, Salisbury. N. J. State Geol., Ann. Rept. 1894, pp. 99–104. 1895.
Tertiary. New Jersey. Included in Miocene.

Beacon Hill formation, Salisbury. Geol. Soc. Am., Bull., vol. vi, p. 483. 1895.
Tertiary. New Jersey. Included in Yellow gravel; Miocene?

Beacon Hill formation, Salisbury. N. J. Geol. Surv., Rept. 1895, pp. 3–7. 1896.
Tertiary. New Jersey. Included in Miocene.

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New Jersey.

Beacon Hill formation, Salisbury. N. J. Geol. Surv., Rept. 1897, pp. 11–13. 1898.
New Jersey.

Beade Mountain bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 426. 1893.
Carboniferous. Texas. Included in Albany division.

Bear River, Cope. U. S. Geol. and Geog. Surv. of Terr., 1873, p. 439. 1874.
Cretaceous or Tertiary. Utah. Exact Syn. Green River.

Bear River group, Cope. U. S. Geol. and Geog. Surv. of Terr., Bull., No. 2, p. 13. 1874.
Cretaceous. Wyoming.

Bear River group, Cope. U. S. Geol. and Geog. Surv. of Terr., Mon., vol. ii, pp. 36–40. 1875.
Cretaceous. Wyoming.

Bear River group, Peale. U. S. Geol. and Geog. Surv. of Terr., 8th Ann. Rept., p. 144. 1876.
Tertiary. Colorado.

Bear River beds, Bowman. Can. Geol. Surv., new ser., vol. iii, pt. i, pp. 20C–22C. 1889.
British Columbia. Included in Upper Paleozoic. Includes Bear River limestone and Cherty series.

Bear River formation, Stanton. Am. Jour. Sci., 3d ser., vol. xliii, pp. 98–115. 1892.
Cretaceous. Utah, Wyoming.

Bear River formation, White. Am. Jour. Sci., 3d ser., vol. xliii, pp. 91–97. 1892.
Cretaceous. Utah, Wyoming. Exact Syn. Bear River Laramie.

Bear River, White. U. S. Geol. Surv., Bull., No. 128. 1895.
Cretaceous. Utah, Idaho, Wyoming.

Bearwallow conglomerate, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Carboniferous. Virginia, West Virginia. Part. Syns. No. xii, Great conglomerate of Rogers.

Beauharnois formation, Chapman. Can. Inst., new ser., vol. viii, pp. 186–190. 1863.
Cambrian. Canada. Included in Potsdam group. "Lower Silurian."

Beaver division, Comstock. Texas Geol. Surv., 1st Ann. Rept., p. 295. 1890.
Silurian. Texas. Included in Leon series.

Beaver limestone, Hayes. Geol. Soc. Am., Bull., vol. v, p. 467. 1894.
Cambrian. Tennessee and Georgia. Included in Lower Cambrian.

Beaver limestone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 16. 1895.
Cambrian. Tennessee, North Carolina.

Beaver River group, White. 2d Pa. Geol. Surv., Rept. Q, pp. 65–71. 1878.
Carboniferous. Pennsylvania. Includes Homewood sandstone, Mercer limestone, Connoquenessing sandstone, and Sharon shales.

Beaver River series, Chance. 2d Pa. Geol. Surv., Rept. V, p. 221 et seq. 1879.
Carboniferous. Pennsylvania.

Beaver River group, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1912. 1895.
Carboniferous. Pennsylvania. Included in No. xii, Pottsville conglomerate.

Beavertown marl, Foerste. Denison Univ. Sci. Lab., Bull., vol. i, p. 65. 1885.
Ohio.

Beavertown marl, Foerste. Denison Univ. Sci. Lab., Bull., vol. iii, p. 4. 1888.
Ohio.

Beavertown marl, Orton. Ohio Geol. Surv., vol. vii, p. 56. 1893.
Silurian. Ohio.

Becket gneiss, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Hawley sheet. 1892.
Cambrian. Massachusetts. Part Syn. Stockbridge limestone.

Beckett conglomerate, Emerson. Geol. Soc. Am., Bull., vol. vii, p. 5. 1895.
Cambrian. Massachusetts.

Becket gneiss, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 50. 1898.
Cambrian. Massachusetts.

Becket conglomerate gneiss, Emerson. U. S. Geol. Surv., Mon., vol. xxix, pp. 31–37. 1898.
Cambrian. Massachusetts. Included in Lower Cambrian.

Becraft limestone, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 245–246, 304. 1894.
Silurian. New York. Included in Lower Helderberg.

Becraft limestone, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Devonian. New York. Included in Helderbergian.

Becraft limestone, Weller. N. J. Geol. Surv., Rept. 1899, p. 39. 1900.
Devonian. New Jersey.

Bedford rock, Owen. Geol. Reconn. Indiana, Rept. 1859–60, p. 137. 1862.
Carboniferous. Indiana.

Bedford shale, Newberry. Ohio Geol. Surv., Rept. 1869, p. 22. 1871.
Carboniferous. Ohio. Included in Waverly group.

Bedford shales, Reid. Ohio Geol. Surv., Rept. Prog. 1870, p. 469. 1871.
Ohio.

Bedford shale, Read. Ohio Geol. Surv., vol. i, pt. i, pp. 485, 508, 514, 525. 1873.
Carboniferous. Ohio.

Bedford stone, Collett. Indiana Geol. Surv., 5th Ann. Rept. for 1873, pp. 276, 280, 283. 1874.
Indiana.

Bedford shale, Newberry. Ohio Geol. Surv., vol. ii, pp. 90–92, 188, 212. 1874.
Carboniferous. Ohio. Included in Waverly. Lower Carboniferous.

Bedford shale, Winchell. Ohio Geol. Surv., vol. ii, pp. 241, 263. 1874.
Carboniferous. Ohio.

Bedford shale, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 73–74. 1875.
Carboniferous. Pennsylvania and Ohio. Exact Syn. No. ix?

Bedford shale, Orton. Rev. of Strat. Geol. of East. Ohio, p. 4. 1880.
Carboniferous. Ohio.

Bedford shale, Orton. Ohio Geol. Surv., Prelim. Rept. Petroleum and Inflammable Gas, p. 25. 1886.
Ohio. Included in Waverly series.

Bedford shale, Orton. Ohio Geol. Surv., vol. vi, pp. 3, 33. 1888.
Carboniferous. Ohio. Included in Waverly group.

Bedford shale, Herrick. Denison Univ. Sci., Lab. Bull., vol. iv, pp. 101, 106. 1888.
Ohio.

Bedford shale, Cooper. Denison Univ. Sci. Lab., Bull., vol. v, p. 25. 1890.
Ohio. Included in Waverly group.

Bedford shale, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 34–35. 1890.
Carboniferous. Ohio. Included in Waverly group.

Bedford shale, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 27. 1893.
Carboniferous. Ohio. Included in Waverly group.

Bedford oolitic limestone, Hopkins and Siebenthal. Indiana Dept. Geol. and Nat. Res., 21st Ann. Rpt. (1896), p. 291. 1897.
Carboniferous. Indiana. Exact Syns. Indiana oolitic limestone, Spergen Hill limestone, White River stone.

Bedford oolitic stone, Blatchley. Indiana Dept. Geol. and Nat. Res., 21st Ann. Rept. (1896), p. 14. 1897.

Bedford oolitic limestone, Blatchley. Indiana Dept. Geol. and Nat. Res., 22d Ann. Rept. (1897), pp. 14, 20. 1898.
Carboniferous. Indiana.

Bedford oolitic limestone, Ashley. Indiana Dept. Geol. and Nat. Res., 23d Ann. Rept. (1898), p. 79. 1899.
Carboniferous. Indiana.

Bed Rock series, Lindgren. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 31. 1896.
Carboniferous. California. Includes Calaveras formation.

Bed Rock series, Turner and Ransome. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 41. 1897.
Carboniferous. California. Includes Calaveras and Mariposa formations.

Bed Rock series, Turner. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 37. 1897.
Carboniferous and older. California. Includes Calaveras and Robinson formations.

Bed Rock series, Lindgren. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 39. 1897.
Carboniferous and Juratrias. California. Includes Calaveras and Sailor Canyon formations.

Bed Rock series, Turner. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 43. 1898.
Juratrias and older. California. Includes Calaveras and Cedar formations.

Bed Rock series, Turner and Ransome. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 51. 1898.
Carboniferous. California. Includes Calaveras.

Bed Rock series, Lindgren. U. S. Geol. Surv., Geol. Atlas of U. S., Folio 66. 1900.
California. Includes Mariposa, Sailor Canyon, and Calaveras formations.

Beekmantown limestone, Clarke and Schuchert. Science, new ser., vol. x, pp. 876-877. 1899.
Silurian. New York. Included in Canadian.

Bee Spring sandstone, Moore. Ky. Geol. Surv., new ser., vol. ii, pp. 105–106. 1877.
Carboniferous. Kentucky. Included in Coal Measures.

Belfast bed, Foerste. Cin. Soc. Nat. Hist., Jour., vol. xviii, nos. 3 and 4, pp. 161, 190. 1896.
Silurian. Ohio. Included in Lower Silurian.

Belfast bed, Foerste. Ind. Dept. Geol. and Nat. Hist., 24th Ann. Rept., pp. 67–68. 1900.
Silurian. Ohio. Included in Middle Silurian.

Belle Isle shale, Jukes. Gen. Rept. on Geol. of Newfoundland, pp. 51 et seq. 1843.
Cambrian? Newfoundland.

Bellowspipe quartzite, Dale. U. S. Geol. Surv., 14th Ann. Rept., pt. ii, pl. lxxi. 1894.
Silurian. Massachusetts.

Bellowspipe limestone, Pumpelly, Wolff, and Dale. U. S. Geol. Surv., Mon., vol. xxiii, pp. 20, 180, 184–186. 1894.
Silurian. Massachusetts.

Bell's Landing group, Aldrich. Ala. Geol. Surv., Bull., No. 1, p. 54. 1886.
Tertiary. Alabama.

Bell's Landing series, Smith and Johnson. U. S. Geol. Surv., Bull., No. 43, p. 46. 1887.
Tertiary. Alabama. Included in Lignitic; Lower Eocene.

Bell's Landing, Langdon. Geol. Soc. Am., Bull., vol. ii, p. 588. 1891.
Tertiary. Alabama. Included in Lower Eocene.

Bell's Landing, Clark. U. S. Geol. Surv., Bull., No. 141, p. 57. 1896.
Tertiary. Alabama. Included in Eocene.

Bellton coal group, White. U. S. Geol. Surv., Bull., No. 65, p. 32. 1891.
Carboniferous. West Virginia, Pennsylvania. Included in Permo-Carboniferous; Dunkard Creek series. Includes Nineveh, Dunkard, and Jollytown coals.

Bellvale Flags, Darton. Geol. Soc. Am., Bull., vol. v, pp. 367, 373. 1894.
Devonian. New Jersey.

Bellvale flags, Ries. N. Y. State Geol., 15th Ann. Rept., vol. i, p. 404. 1897.
Devonian. New York.

Belly River series, Dawson. Can. Geol. Surv., Rept. 1882–83–84, pp. 37C–126C. 1885.
Cretaceous. Canada.

Belly River series, McConnell. Can. Geol. Surv., new ser., vol. i, pp. 63C–65C. 1886.
Cretaceous. Canada.

Belly River series, Tyrrell. Can. Geol. Surv., new ser., vol. ii, 90E–129E. 1887.
Cretaceous. Canada.

Belly River formation, White. U. S. Geol. Surv., Bull., No. 82, p. 173. 1891.
Cretaceous. Rocky Mountains.

Beloit formation, Sardeson. Am. Geol., vol. xix, pp. 24, 26–29. 1897.
Silurian. Mississippi Valley. Included in Lower Silurian. Includes Fucoid, Stictopora, Stictoporella, Bellerophon, and Buff limestone beds.

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Algonkian. Montana.

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Cretaceous. Kansas. Included in Upper Cretaceous.

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Cretaceous. Kansas. Included in Upper Cretaceous. Includes Upper and Lower groups.

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Carboniferous. Ohio. Included in Waverly group.

Berea series, Herrick. Denison Univ. Sci. Lab., Bull., vol. iv, p. 106. 1888.

Ohio. Includes Waverly shale, Berea shale, Berea grit, Bedford shale, Cleveland shale.

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Carboniferous. Ohio. Included in Waverly group. Exact Syn. Waverly black slate.

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Ohio. Included in Waverly group.

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Carboniferous. Indiana.

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Carboniferous. Missouri. Included in Coal Measures.

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Carboniferous. Missouri. Included in Missourian. Exact Syn. Winterset limestone.

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Carboniferous. Iowa. Included in Missourian formation. Includes Earlham limestone; Winterset limestone.

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Carboniferous. Missouri. Included in Middle Coal Measures.

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Vermont.

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Cretaceous. Western United States.

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Cretaceous. Western United States.

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Tertiary. Utah.

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Tertiary. Rocky Mts.

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Tertiary. California.

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Devonian. Michigan.

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Devonian. Kentucky.

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Carboniferous (?). Tennessee.

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Kentucky.

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Kentucky.

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Devonian. Ohio.

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Devonian. Kentucky.

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Devonian. Alabama.

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Devonian. Alabama. Exact Syn. Chattanooga shale.

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Devonian. Indiana.

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Tertiary. Alabama.

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Tertiary. Alabama. Included in Lower Eocene.

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Cretaceous? Kansas.

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Cretaceous. Texas. Includes Glauconitic beds, Ponderosa marls, Austin chalk, Eagle Ford shales, Lower Cross Timber sandstone.

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Paleozoic. New York. Included in New York system. Includes No. II, Pennsylvania survey. Exact Syns. Birdseye limestone, Mohawk limestone, Chazy limestone, Metalliferous or Transition lime rock.

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Paleozoic. New York. Included in New York system. Includes Birdseye and Chazy.

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Paleozoic. New York. Included in Champlain division. Includes Mohawk limestone, Birdseye limestone, Bald Mountain limestone, Blue limestone, Chazy limestone, Neeleytown limestone, Metalliferous, Transition and Sparry lime rocks, and No. II, Pennsylvania survey.

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Silurian. New York.

Black River and Birdseye limestone, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., p. 114. 1855.
Silurian. Missouri.

Black River limestone, Hall. Am. Jour. Sci., 2d ser., vol. xvii, pp. 181–193. 1854.
Silurian. Michigan.

Black River, Shumard. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, p. 159. 1855.
Silurian. Missouri. Included in Lower Silurian.

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Silurian. Missouri. Included in Lower Silurian.

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Silurian. Missouri.

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Silurian. New York.

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Massachusetts.

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Pennsylvania. Included in Devonian. Includes Upper division.

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Silurian. Ohio.

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Tertiary. Virginia. Included in Miocene.

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Devonian. Michigan.

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Silurian. Wisconsin. Exact Syn. Trenton.

Blue limestone, Percival. Wis. Geol. Surv., Rept. 1854, p. 15, and Rept. for 1856, pp. 25, 77–86. 1855.
Silurian. Wisconsin. Includes Blue limestone and Buff limestone.

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Silurian. Wisconsin.

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Silurian? Kentucky.

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Cretaceous. Arkansas. Included in Upper Arenaceous beds.

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Cretaceous. Kansas. Included in Benton. Exact Syn. Victoria shale.

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Cretaceous and Eocene. Jamaica. Includes Catadupa, Chapelton, Richmond, Minho, Ballard, Logie Green, Frankenfield, Jerusalem, and Yallahs beds.

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Pleistocene. Missouri. Exact Syn. Loess.

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Pleistocene, Mississippi.

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Tertiary? Tennessee,

Bluff group, Safford. Geology of Tennessee, pp. 432–434. 1869.
Pleistocene. Tennessee. Includes Bluff loam and Bluff gravel.

Bluff lignite, Safford. Geology of Tennessee, pp. 428–431. 1869.
Tertiary. Tennessee.

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Bluff, Hayden. U. S. Geol. and Geog. Surv. of Terr., 1st–3d Ann. Repts. p. 18. 1873.
Pleistocene. Nebraska.

Bluff, Shumard. Mo. Geol. Surv., Rept. 1855–1871, p. 315. 1873.
Pleistocene. Missouri.

Bluff, Broadhead. Mo. Geol. Surv. Rept. 1855–1871, pp. 40, 67, 94. 1873.
Pleistocene. Missouri.

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Pleistocene. Missouri. Exact Syn. Loess.

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Pleistocene. Tennessee.

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Pleistocene. Missouri. Exact Syn. Loess.

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Tertiary. Tennessee.

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Cretaceous. Texas. Included in Washita division.

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Carboniferous. Texas. Included in Canyon division.

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Archean. Texas. Included in Burnetan system.

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Carboniferous. Indian Territory. Included in Coal Measures.

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Carboniferous. Indian Territory.

Bogue Island formation, Hill. Harvard Coll. Mus. Comp. Zool., Bull., vol. xxxiv, p. 103. 1899.
Pleistocene. Jamaica. Included in Coastal series.

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Algonkian. Michigan. Exact Syn. St. Louis conglomerate.

Bolivar sandstone, Stevenson. 2d Pa. Geol. Surv., Rept. K^3, pp. 41–42. 1878.
Carboniferous. Pennsylvania. Included in Lower Productive series.

Bolivar fireclay, White. U. S. Geol. Surv., Bull., No. 65, p. 159. 1891.
Carboniferous. Pennsylvania, West Virginia. Included in Lower Coal Measures, Allegheny River series.

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Carboniferous. Tennessee. Included in Pennsylvanian series. Exact Syn. Lookout sandstone.

Bonaventure formation, Chapman. Can. Inst., new ser., vol. viii, pp. 450–451. 1863.
Carboniferous. Canada.

Bonaventure formation, Logan. Can. Geol. Surv., Rept. 1843–1863, pp. 404–405, 886. 1863.
Carboniferous. Canada. Included in Gaspe series.

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Carboniferous. New Brunswick.

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Carboniferous. New Brunswick. Included in Lower Carboniferous.

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New Brunswick. Partly included in Devonian.

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Carboniferous. Arkansas. Included in Mississippian series, Osage group.

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Carboniferous. Arkansas. Included in Lower Carboniferous.

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Carboniferous. Indian Territory. Included in Lower Carboniferous.

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Carboniferous. Arkansas.

Booneville stage, Stevenson. N. Y. Acad. Sci., Trans., vol. vx, p. 51. 1896.
Carboniferous. Arkansas.

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Juratrias. Virginia. Included in Tuckahoe group.

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Cretaceous. Texas. Includes Paluxy sand, Glen Rose bed, and Trinity sand.

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Cretaceous. Texas.

Bosque division, Dumble. Geol. Soc. Am., Bull., vol. vi, p. 378. 1895.
Cretaceous. Texas. Included in Lower Cretaceous.

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Silurian. Pennsylvania. Included in Upper Helderberg, or No. VI.

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Silurian. Pennsylvania. Included in Lower Helderberg, or No. VI.

Bossardville limestone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 929–934, 948, 960, 964. 1892.
Silurian. Pennsylvania. Included in No. vi. Exact Syn. Lewistown limestone.

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Silurian. New Jersey.

Boston group, Branner. Ark. Geol. Surv., 1888, vol. iv, p. xiii. 1888.
Carboniferous. Arkansas. Included in Mississippian series. Part. Syns. Chester and St. Louis.

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Carboniferous. Arkansas. Included in Mississippian series.

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Carboniferous. Arkansas. Included in Lower Carboniferous.

Boston group, Drake. Am. Phil. Soc., Proc., vol. xxxvi, p. 354. 1897.
Carboniferous. Indian Territory. Included in Lower Carboniferous. Includes Kessler limestone, Pentremital limestone, Washington shale and sandstone, Archimedes limestone, Marshall shale. Exact Syns. St. Louis and Chester.

Boston group, Williams. Ark. Geol. Surv., 1892, vol. v, pp. 358–362. 1900.
Carboniferous. Arkansas.

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British Columbia. Exact Syn. Anderson River group.

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British Columbia.

Bottom Prairie, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., pp. 66, 172. 1855.
Pleistocene. Missouri.

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Pleistocene, Canada.

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Pleistocene. Illinois.

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Pleistocene, Canada.

Bowden beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 340. 1898.
Tertiary. Jamaica. Included in Chipolan stage; Oligocene. Exact Syn. Monkey Hill beds.

Bowden, Hill. Harvard Coll. Mus. of Comp. Zool., Bull., vol. xxxiv, p. 82. 1899.
Tertiary. Jamaica. Included in Coastal series. Pliocene.

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Silurian. Iowa.

Bow River group, McConnell. Can. Geol. Surv., new ser., vol. ii, pp. 15D, 29D–30D. 1887.
Cambrian. Canada.

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Cambrian. Canada.

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Included in Neocene. Montana.

Bozeman Lake beds, Peale. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 24. 1896.
Included in Neocene. Montana.

Bradford red beds, Carll. 2d Pa. Geol. Surv., Rept. I^5, pp. 95–97. 1890.
Carboniferous. Pennsylvania. Included in Pocono.

Bradford 3d sandstone, Carll. 2d Pa. Geol. Surv., Rept. I^5, pp. 133–135. 1890.
Devonian. Pennsylvania.

Branchtown clay, Lewis. Phil. Acad. Nat. Sci., Proc., vol. xxxii, pp. 268, 296–297. 1880.
Tertiary. Pennsylvania.

Brandon formation, Clark. U. S. Geol. Surv., Bull., No. 83, p. 90. 1891.
Tertiary. Vermont, Pennsylvania, Georgia. Included in Eocene.

Braxton, Taff and Brooks. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 34. 1896.
Carboniferous. West Virginia.

Braxton formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 69. 1900.
Carboniferous. West Virginia, Ohio. Includes Monongahela River Coal series and Elk River series in part.

Breathitt formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 47. 1898.
Carboniferous. Kentucky. Included in Pennsylvanian series.

Bretonian, Walcott. U. S. Geol. Surv., Bull., No. 81, p. 247. 1891.
Cambrian. New Brunswick. Included in Upper Cambrian.

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Carboniferous. Tennessee.

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Carboniferous. Tennessee. Part. syn. Walden sandstone.

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Carboniferous. Tennessee. Part. Syn. Walden sandstone.

Bridgeport sandstone, Claypole. 2d Pa. Geol. Surv., Rept. F^2, pp. 57, 58. 1885.
Silurian. Pennsyvania. Included in Onondaga group.

Bridgeport sandstone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 761–763. 1892.
Silurian. Pennsylvania. Included in No. V, Salina, Bloomsburg shale.

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Tertiary. Wyoming.

Bridger group, Comstock. Am. Jour. Sci., 3d ser., vol. vi, p. 427. 1873.
Neocene. Wyoming.

Bridger, Cope. Rept. Secy. of War to 43d Cong., vol. ii, pt. ii, p. 592. 1874.
Tertiary. New Mexico. Included in Eocene.

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Tertiary.

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Tertiary. Utah.

Bridger, Emmons. U. S. Geol. Exploration of 40th Parallél, vol. ii, pp. 204, 244. 1877.
Tertiary. Utah.

Bridger, White. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 19, 22, 37. 1878.
Tertiary. Utah, Colorado.

Bridger group, King. U. S. Geol. Exploration of 40th Parallel, vol. i, p. 394. 1878.
Tertiary. Wyoming. Included in Eocene.

Bridger, Peale. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., pp. 635, 639. 1879.
Tertiary. Wyoming.

Bridger, Endlich. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., p. 132. 1879.
Tertiary. Wyoming.

Bridger beds, McMaster. Mus. of Geol. and Arch. of Coll. of N. J., Contributions, vol. i, no. i, pp. 45–54. 1881.
Wyoming.

Bridger, Cope. U. S. Geol. and Geog. Surv. of Terr., Mon., vol. iii, pp. 11-12. 1881.
Tertiary.

Bridger, Clark. U. S. Geol. Surv., Bull., No. 83, p. 141. 1891.
Tertiary. Wyoming, Utah. Exact Syn. Dinoceras.

Bridger, Peterson. Am. Mus. Nat. Hist., Bull., vol. v, p. 73. 1895.
Tertiary. Utah.

Bridger beds, Osborn. Am. Nat., vol. xxxi, pp. 966–968. 1897.
Tertiary. Colorado. Included in Eocene.

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Tertiary. Colorado.

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Tertiary. Alabama. Included in Eocene Claiborne.

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Carboniferous. Illinois.

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Carboniferous. Kansas. Exact Syn. Garnett limestone.

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Carboniferous. Missouri. Included in Augusta stage.

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Carboniferous. Texas. Included in Strawn division.

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Silurian. West Virginia, Maryland.

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Silurian. Virginia, West Virginia. Part Syns. Clinton, Medina, Rogers, Nos. 4 and 5, and Levant.

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Carboniferous. British Columbia. Exact Syn. Marble Canon limestone.

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Carboniferous? British Columbia.

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Carboniferous. California. Included in Bed Rock series.

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Carboniferous. California. Included in Bed Rock series.

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Carboniferous. California. Included in Bed Rock series.

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Carboniferous. California. Included in Bed Rock series.

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Carboniferous. California. Includes Clipper Gap, Delhi, Cape Horn, Relief, and Blue Canyon formations.

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Cretaceous. Mississippi.

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Silurian. New York.

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Calciferous, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, p. 230. 1842.
Included in Lower Silurian.

Calciferous group, Vanuxem. Geol. of New York, pt. iii, pp. 30–38. 1842.
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Paleozoic. New York. Included in Calciferous group.

Calciferous sandstone, Hall. Geol. of New York, pt. iv, 4th Geol. Dist., pp. 18, 28. 1843.
Paleozoic. New York. Included in New York system.

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Silurian. New York. Included in Champlain division of New York system.

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New York. Included in New York system, Champlain division.

Calciferous sandstone, Foster and Whitney. Rept. on Geol. of Lake Superior Dist., pt. ii, p. 134, spec. sess. Mar., 1851, Ex. Doc. no. iv. 1851.
Silurian. Lake Superior region.

Calciferous sandstone, Shumard. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, p. 160. 1855.
Silurian. Missouri. Included in Lower Silurian. Includes Saccharoidal sandstone, 2d Magnesian limestone. Exact Syns. St. Peter sandstone, Lower Magnesian limestone of Iowa, Wisconsin, and Minnesota.

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Indiana.

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Carboniferous. Texas. Includes Campophyllum bed, Bluff Creek, Home Creek, Hog Creek, Chert, No. 7, Clear Creek, Cedarton, Adams Branch limestone, Brownwood, Rochelle conglomerate, and Coral limestone beds.

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Cretaceous. Texas.

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Cretaceous. Texas. Included in Upper Cretaceous.

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Cretaceous. Texas.

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Cretaceous. Texas. Included in Fredericksburg division of Lower Cretaceous.

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Cretaceous. Colorado. Included in Benton group.

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Cretaceous. Colorado.

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Carboniferous. Kansas.

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Carboniferous. Kansas.

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Carboniferous. Kansas.

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Carboniferous. Kansas. Exact syn. Garnett limestone.

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Tertiary. British Columbia. Included in Miocene.

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Tertiary. North and South Carolina.

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Included in Miocene. Includes Upper Atlantic Miocene. Exact syn. Sumpter.

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Tertiary. Trinidad. Included in Newer Parian group.

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Trinidad.

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British Columbia.

Cascade series, Dawson. Can. Geol. Surv., Rept. 1877–78, pp. 63B, 67B, etc. 1879.
Carboniferous? British Columbia.

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Devonian. Pennsylvania. Included in Chemung.

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Archean, Michigan.

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Cretaceous. Montana.

Caseyville sandstone, Owen. Ky. Geol. Surv., vol. iii, p. 21. 1857.
Carboniferous. Kentucky. Included in Coal Measures.

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Devonian. New York.

Cashaqua shale, Hall. N. Y. Geol. Surv., 5th Ann. Rept., p. 165. 1841.
New York.

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Cason limestone and shale, Williams. Am. Jour. Sci., 3d ser., vol. xlvii, pp. 326–329. 1894.
Silurian. Arkansas. Included in Upper Silurian.

Cassville plant shale, White. U. S. Geol. Surv., Bull. No. 65, p. 41. 1891.
Carboniferous. West Virginia. Included in Permo-Carboniferous, Dunkard Creek series.

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Carboniferous. Montana. Included in Madison group.

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Cambro-Silurian. Canada.

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Cambrian? British Columbia.

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Canada. Included in Lower Paleozoic.

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Algonkian. Virginia, Maryland, West Virginia.

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Virginia, Maryland.

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Devonian. New York. Includes Nos. 8, 9, 10, and 11 of Pennsylvania survey.

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Devonian. New York. Includes Montrose sandstone, Chemung group, Ithaca group, Sherburne flags, Hamilton group, Marcellus shales.

Catskill group, Vanuxem. Geol. of New York, pt. iii, pp. 186–194. 1842.
Paleozoic. New York. Included in New York system. Includes Montrose and Oneonta sandstones, No. 9 Pennsylvania survey.

Catskill shaly limestone, Vanuxem. Geol. of New York, pt. iii, pp. 120–122. 1842.
Paleozoic. New York. Included in New York system. Includes Delthyris shaly limestone, Scutella limestone. Part. syn. No. 6, Pennsylvania survey.

Catskill division, Mather. Geol. of New York, pt. i, pp. 299–316. 1843.
Paleozoic. New York. Included in New York system. Includes Montrose and Oneonta sandstones, Old Red Sandstone Nos. ix, x, xi, xii, Pennsylvania survey.

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Devonian. New York. Included in Catskill division of New York system.

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Devonian. New York. Included in New York system. Includes Chemung, Portage, Ithaca and Catskill groups.

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Silurian. New York. Included in No. 6 Pennsylvania Survey, Helderberg series (or division) of the New York system. Includes Delthyris shaly limestone and Scutella limestone.

Catskill group, Dawson. Am. Jour. Sci., 2d ser., vol. xxxv, pp. 314–319. 1863.
Devonian. Canada. Exact Syn. Old Red Sandstone.

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Devonian. Ohio.

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Devonian. West Virginia.

Catskill, Hotchkiss. A Geographical and Political Summary of Virginia, p. 22. 1876.
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Devonian. Pennsylvania. Exact syns. Ponent, Old Red Sandstone.

Catskill, Newberry. Ohio Geol. Surv., vol. iii, p. 21. 1878.
Carboniferous. Ohio, Pennsylvania.

Catskill group, Stevenson. Am. Jour. Sci., 3d ser., vol. xv, pp. 423–430. 1878.
Devonian. Pennsylvania.

Catskill, Chance. 2d Geol. Surv. of Pa., Rept. G^4, pp. 101–103. 1880.
Devonian. Pennsylvania. Exact syn. No. ix, Ponent.

Catskill, White. 2d Geol. Surv. of Pa., Rept. G^5, pp. 9–73. 1881.
Devonian. Pennsylvania. Includes Mount Pleasant and Elk Mountain shales, Cherry Ridge group, Honesdale sandstone, Montrose shale, Paupack sandstone, New Milford group, Starucca shale. Exact syn. No. ix.

Catskill, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 26–27. 1881.
Devonian. Pennsylvania. Exact syn. No. ix.

Catskill, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 91–104. 1882.
Devonian. Pennsylvania. Includes Mount Pleasant shale, Elk Mountain sandstone, Cherry Ridge group, Honesdale sandstone, Montrose shale, Delaware River flags, New Milford shale, Starucca sandstone.

Catskill, Stevenson. 2d Pa. Geol. Surv., Rept. T^2, pp. 73–75. 1882.
Devonian. Pennsylvania.

Catskill, White. 2d Pa. Geol. Surv., Rept. G^7, pp. 54–63. 1883.
Devonian. Pennsylvania. Exact syn. No. ix.

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Devonian. Pennsylvania.

Catskill, Claypole. 2d Pa. Geol. Surv., Rept. F^2, pp. 72–78. 1885.
Devonian. Pennsylvania. Includes Kings Mill sandstone and shale, Dellville sandstone.

Catskill, Ashburner. 2d Pa. Geol. Surv., Rept. R^2, pp. 376–377. 1885.
Devonian. Pennsylvania. Exact syn. No. ix.

Catskill, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 88–99. 1885.
Devonian. Pennsylvania.

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Carboniferous. Pennsylvania. Exact syn. No. ix.

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Silurian. Arkansas. Included in Lower Helderberg.

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Devonian.

Catskill, Stevenson. Am. Assoc. Adv. Sci., Proc., vol. xl, p. 219. 1891.
Devonian. Appalachian region.

Catskill, Prosser. Am. Geol., vol. vii, p. 351. 1891.
Devonian. New York, Pennsylvania.

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Devonian. Pennsylvania. Exact Syn. No. ix.

Catskill, Stevenson. Am. Geol., vol. ix, p. 6. 1892.
Devonian. Appalachian region. Included in Upper Devonian, Chemung.

Catskill, Darton. Am. Jour. Sci., 3d ser., vol. xlv, pp. 208–209. 1893.
Devonian. New York. Includes Portage and Chemung.

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Devonian. New York.

Catskill sandstone, Williams and Clark. Maryland; its Resources, Industries, and Institutions, pp. 70, 72. 1893.
Devonian. Maryland. Part. Syn. No. ix.

Catskill group, Hall. N. Y. State Geol., 12th Ann. Rept., pp. 33–35. 1893.
Devonian. New York.

Catskill, Prosser. U. S. Geol. Surv., Bull. No. 120, p. 78. 1894.
Devonian. New York, Pennsylvania. Included in Upper Devonian. Includes Mount Pleasant red shale, Elk Mountain sandstone and shale, Cherry Ridge group, Honesdale sandstone.

Catskill sandstone, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–878. 1899.
Devonian. New York. Included in Chautauquan.

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Devonian. West Virginia.

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Paleozoic. New York. Included in New York system. Includes Cocktail grit.

Cauda-Galli grit, Mather. Geol. of New York, pt. i, pp. 341–342. 1843.
Paleozoic. New York. Included in Helderberg division.

Cauda-Galli grit, Hall. Geol. of New York, pt. iv, 4th Geol. Dist., pp. 18, 150. 1843.
Paleozoic. New York. Included in New York system. Exact Syn. Cocktail grit.

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Devonian. New York. Included in Helderberg division of New York system.

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New York. Included in Helderberg division of New York system.

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Devonian. New Jersey.

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Devonian. Pennsylvania.

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Devonian. Pennsylvania. Included in Oriskany.

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Cavaniol group, Drake. Am. Phil. Soc., Proc., vol. xxxvi, p. 371. 1897.
Carboniferous. Indian Territory. Included in Upper Coal Measures.

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Carboniferous. Kansas.

Cave rock series, Swallow. Kan. Geol. Surv., Prelim. Report, p. 20. 1866.
Carboniferous. Kansas.

Cave Creek formation, Cragin. Colo. College Stud., vol. vi, pp. 3, 27–39. 1896.
Permian. Kansas. Included in Cimarron series. Includes Medicine Lodge gypsum and Shimer.

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Carboniferous. Kansas. Included in Elk Falls limestone.

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Silurian. Canada. Includes Water lime and Tentaculite. Exact Syn. Bertie dolomite.

Cayugan, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Silurian. New York. Includes Salina beds, Rondout Water lime, Manlius limestone.

Cedar, Turner. Am. Geol., vol. xiii, p. 231. 1894.
California. Includes Hosselkus limestone.

Cedar formation, Smith. Jour. of Geol., vol. ii, pp. 604–609. 1894.
Trias. California. Includes Swearinger shale and Hosselkus limestone.

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Juratrias. California.

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Juratrias. California. Included in Bed-Rock series.

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Permian. Kansas. Included in Cimarron series.

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Permian. Kansas, Oklahoma. Included in Glass Mountain formation of Cimarron series.

Cedarton bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 391. 1893.
Carboniferous. Texas. Included in Canyon division.

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Devonian. Iowa.

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Devonian. Iowa.
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Devonian. Iowa.
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Devonian. Iowa.
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Devonian. Illinois.
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Devonian. Iowa.
Cedar Valley limestone, Udden. Iowa Geol. Surv., vol. ix, p. 269. 1899.
Devonian. Iowa.
Cedar Valley limestone, Williams. Iowa Geol. Surv., vol. x, p. 345. 1900.
Devonian. Iowa.
Cedar Valley stage, Norton. Iowa Geol. Surv., vol. ix, p. 457. 1899.
Devonian. Iowa.
Cedarville guelph limestone, Orton. Ohio Geol. Surv., Rept. Progress in 1870, pp. 271, 301. 1871.
Silurian. Ohio. Included in Niagara series.
Cedarville beds, Phinney. Indiana Dept. Geol. and Nat. Hist., 13th Ann. Rept. for 1883, p. 142. 1884.
Silurian. Indiana.
Cedarville limestone, Orton. Ohio Geol. Surv., Prelim. Rept. Petroleum and Inflammable Gas, p. 21. 1886.
Ohio. Included in Niagara series.
Cedarville strata, Foerste. Denison Univ. Sci. Lab., Bull., vol. iii, p. 6. 1888.
Ohio.
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Upper Silurian. Ohio. Included in Niagara group.
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Silurian. Ohio.
Central limestone, Safford. Geol. Reconn. of the State of Tenn., 1st Rept., pp. 154–156. 1856.
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Silurian. Tennessee. Included in Trenton or Lebanon.
Ceratops beds, Marsh. Am. Jour. Sci., 3d ser., vol. xxxviii, p. 501. 1889.
Cretaceous. Rocky Mountains. Included in Upper Cretaceous.
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Cretaceous or Tertiary. Colorado, Wyoming.
Ceratops beds, Hatcher. Am. Nat., vol. xxx, pp. 114–118. 1896.
Tertiary. Rocky Mountain region.
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Cretaceous. Colorado.
Cerro Gordo moraine, Leverett. U. S. Geol. Surv., Mon., vol. xxxviii, pp. 218–222. 1899.
Pleistocene. Illinois.
Chadron formation, Darton. U. S. Geol. Surv., 19th Ann. Rept., pt. iv. pp. 736, 759. 1899.
Tertiary. Nebraska. Included in Oligocene?

haelites limestone, Broadhead. Mo. Geol. Surv., Rept. 1873–74, p. 202. 1874.
Carboniferous. Missouri. Included in Coal Measures.

haffin bed, Drake. Texas Geol. Surv., 4th Ann. Rept., pp. 410–412. 1893.
Carboniferous. Texas. Included in Cisco division.

halky marl beds, Hill. Ark. Geol. Surv., 1888, vol. ii, p. 84. 1888.
Cretaceous. Arkansas. Included in Upper Cretaceous or Exogyra castata series. Includes Marlbrook-Columbus or Gryphæa vesicularis chalk marls, Brownstone marls, White Cliff chalk, Rocky Comfort chalk.

Chamberlain shales, Walcott. Geol. Soc. Am., Bull., vol. x, pp. 199, 206. 1899.
Algonkian? Pre-Cambrian. Montana. Included in Belt terrane.

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Algonkian. Montana. Included in Belt terrane.

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Cretaceous. Kansas. Included in Belvidere beds.

Champion shell bed, Prosser. Kan. Univ. Geol. Surv., vol. ii, pp. 114–115. 1897.
Lower Cretaçeous. Kansas. Included in Comanche series, Fredericksburg division. Exact Syn. Comanche Peak limestone.

Champlain group, Emmons. Geol. of New York, pt. ii, pp. 99–126. 1842.
Paleozoic. New York. Included in New York Transition system. Includes Potsdam sandstone, Calciferous sand rock, Chazy limestone, Birdseye limestone, Trenton limestone, Utica slate, Lorraine shales, Grey sandstone.

Champlain division, Mather. Geol. of New York, pt. i, pp. 366-421. 1843.
Paleozoic, New York. Included in New York system. Includes Hudson River group, Utica slate, Trenton, Black River limestone, Calciferous group, Potsdam sandstone.

Champlain division, Emmons. Agriculture of New York, vol. i, pp. 117-141. 1846.
New York. Includes Potsdam and Calciferous sandstone, Chazy and Birdseye limestones, Isle Lamotte marble, Trenton limestone, Utica slate, Lorraine shales, and Oneida conglomerate.

Champlain, Perry. Boston Soc. Nat. Hist., Proc., vol. xi, 1866-68. p. 352. 1867.
Vermont.

Champlain, Hitchcock. Geol. Soc. Am., Bull., vol. vii, pp 2, 3. 1895.
Pleistocene. Vermont, New Hampshire, etc. Exact Syn. Mecklenburg stage.

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Pleistocene. Massachusetts. Included in Glacial.

Champlainic, Clarke and Schuchert. Science, new ser., vol. x, pp. 875-876. 1899.
Silurian. New York. Exact Syn. Ordovician.

Chanute shales, Haworth and Kirk. Kan. Univ. Quart., vol. ii, p. 109. 1894.
Carboniferous. Kansas.

Chapelton, Hill. Harvard Coll. Mus. of Comp. Zool., Bull., vol. xxxiv, pp. 61-65. 1899.
Eocene. Jamaica. Included in Blue Mountain series, Cambridge formation.

Chapman dolomite, Cragin. Am. Geol., vol. xix, p. 358. 1897.
Permian. Kansas, Oklahoma. Included in Dog Creek formation of Cimarron series.

Chapman sandstone, Williams. U. S. Geol. Surv., Bull. No. 165, p. 78. 1900.
Devonian. Maine.

Chapman sandstone, Gregory. U. S. Geol. Surv., Bull. No. 165, p. 133. 1900.
Maine.

Charette limestone, Broadhead. Mo. Geol. Surv., Rept. 1855–1871, p. 49. 1873.
Silurian. Missouri. Included in Trenton limestone.

Chariton conglomerate, Bain. Iowa Geol. Surv., vol. v, pp. 394-398. 1896.
Carboniferous, Iowa. Included in Des Moines stage.

Charleston sandstone, Campbell and Mendenhall. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 508. 1896.
Carboniferous. West Virginia. Exact Syn. No. xiv. Lower Barren Measures.

Charleston sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 69. 1900.
Carboniferous. West Virginia, Ohio. Included in Elk River series.

Chase formation, Prosser. Jour. of Geol., vol. iii, pp. 771–786. 1895.
Permo-Carboniferous. Kansas.

Chase limestones, Cragin. Colo. College Stud., vol. vi, pp. 3, 7. 1896.
Permian. Kansas. Included in Big Blue series.

Chase formation, Haworth. Kan. Univ. Geol. Surv., vol. i, pp. 180–187. 1896.
Carboniferous. Kansas. Included in Permian.

Chase formation, Beede. Kan. Univ. Quart., vol. ix, p. 198. 1900.
Carboniferous. Kansas.

Chattahoochee series, Spencer. Ga. Geol. Surv., 1st Rept. of Prog., p. 57. 1891.
Tertiary. Georgia. Included in Miocene.

Chattahoochee series, Langdon. Ga. Geol. Surv., 1st Rept. of Prog., p. 97. 1891.
Tertiary. Georgia.

Chattahoochee group, Dall. Wagner Free Inst. Sci., Trans., vol. iii, pt. ii, p. 209. 1892.
Miocene. Georgia, Florida. Included in Chipola epoch. Includes Hawthorne and Ocheesee beds.

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Tertiary. Georgia.

Chattahoochee, Foerste. Am. Jour. Sci., 3d ser., vol. xlviii, pp. 41–54. 1894.
Tertiary. Georgia, Florida. Included in Miocene.

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Tertiary. Florida. Included in Miocene. Includes Hawthorne beds, Tampa limestone.

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Devonian. Tennessee. Exact syn. black shale.

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Devonian. Alabama.

Chattanooga, Spencer. Ga. Geol. Surv., The Paleozoic group, p. 50. 1893.
Devonian. Georgia.

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Devonian. Alabama.

Chattanooga black shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 12. 1894.
Devonian. Kentucky, Virginia, Tennessee.

Chattanooga black shale, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 2, 4, 6, 8, 19, 20, 21, 22, 35. 1894–95, 1896.
Devonian. Georgia, Tennessee, Alabama.

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Devonian. Tennessee, North Carolina.

Chattanooga shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Devonian. Tennessee.

Chattanooga black shale, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 35. 1896.
Devonian. Alabama. Part. syn. Black shale.

Chattanooga shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 46, 47. 1898.
Devonian. Kentucky.

Chattanooga shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 53. 1899.
Devonian. Tennessee.

Chattanooga shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
Devonian. Virginia, Tennessee.

Chautauquan, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Devonian. New York. Includes Chemung beds.

Chazy limestone, Emmons. Geol. of New York, pt. ii, pp. 107, 315. 1842.
Paleozoic. New York. Included in New York Transition system, Champlain group.

Chazy, Emmons. Agriculture of New York, vol. i, p. 122. 1846.
Silurian. New York. Included in Champlain division of New York system.

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New York. Included in New York system, Champlain division.

Chazy limestone, Hall. Am. Jour. Sci., 2d ser., vol. xvii, pp. 181–193. 1854.
Silurian. Michigan.

Chazy limestone, Hitchcock. Geol. of Vermont, vol. i, pp. 272–279. 1861.
Paleozoic. Vermont. Included in Trenton period. Exact syn. Isle La Motte limestone.

Chazy formation, Logan. Can. Geol. Surv., Rept. 1843–1863, pp. 123–135. 1863.
Lower Silurian. Canada.

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Silurian. Canada. Included in Lower Silurian.

Chazy formation, Bell. Can. Geol. Surv., Rept. 1863–1866, p. 170. 1866.
Silurian. Canada.

Chazy, Smith. Ala. Geol. Surv., Rept. 1875, pp. 24, 96, 111. 1876.
Silurian. Alabama.

Chazy, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 55–59. 1881.
Silurian. Pennsylvania.

Chazy group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, pp. 270, 279. 1881.

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Silurian. Kentucky. Included in Canadian period.

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Silurian or Cambrian. Kentucky. Included in Canadian period.

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Vermont.

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Silurian. New York.

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Silurian. Canada.

Chazy group, Miller. North American Geol. and Pal., p. 36. 1889.

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Silurian. Arkansas.

Chazy limestone, Orton. Ky. Geol. Surv., Rept. on Petroleum, etc., p. 128. 1891.
Silurian. Kentucky.

Chazy limestone, Cushing. N. Y. State Geol., 13th Ann. Rept., pp. 481–483. 1894.
Silurian. New York.

Chazy, Cushing. Geol. Soc. Am., Bull., vol. vi, p. 286. 1895.
Ordovician. New York.

Chazy, Brainerd and Seeley. Am. Mus. Nat. Hist., Bull., vol. viii, pp. 305–315. 1896.
Silurian. Vermont and New York.

Chazy limestone, Cushing. N. Y. State Geol., 15th Ann. Rept., vol. i, p. 513. 1897.
Silurian. New York.

Chazy, Marcou. Am. Geol., vol. xix, pp. 46–49. 1897.
Silurian. New York.

Chazy limestone, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Silurian. New York. Included in Canadian.

Chehalis, Lawson. Am. Geol., vol. xiii, p. 437. 1894.
Tertiary. Washington. Included in Eocene or Miocene.

Chemung group, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 322–324, 326. 1839.
Devonian. New York.

Chemung group, Hall. N. Y. Geol. Surv., 4th Ann. Rept. pp. 402–409. 1840.
Devonian. New York.

Chemung, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, pp. 232, 235. 1842.
Included in Devonian. Includes Middle division.

Chemung group, Hall. Am. Jour. Sci., 1st ser., vol. xlii, p. 54. 1842.
Devonian. Ohio.

Chemung group, Vanuxem. Geol. of New York, pt. iii, pp. 179–185. 1842.
Paleozoic. New York. Included in New York system.

Chemung group, Hall. Geol. of New York, pt. iv, 4th Geol. Dist., pp. 18, 251–261. 1843.
Paleozoic. New York. Included in New York system. Includes Ithaca group, No. 9 Pennsylvania survey.

Chemung group, Emmons. Agriculture of New York, vol. i, pp. 190–193. 1846.
Devonian. New York. Included in Catskill division of New York system.

Chemung, Whittlesey. Am. Assoc. Adv. Sci., Proc., vol. v, p. 207. 1851.
Devonian. Ohio.

Chemung group, Meek. Mo. Geol. Surv., 1st and 2nd Ann. Repts., pt. ii, p. 101 1855.
Carboniferous. Missouri. Includes Chouteau limestone.

Chemung, Swallow. Mo. Geol. Surv., 1st and 2nd Ann. Repts., pp. 101, 176. 1855
Devonian. Missouri. Includes Chouteau, Vermicular, and Lithographic.

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Devonian. Missouri. Includes Chouteau, Vermicular sandstone, and Lithographi limestone.

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Devonian. Iowa.

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Devonian. Iowa.

Chemung group, Whitney. Iowa Geol. Surv., vol. i, p. 376. 1858.
Devonian. Iowa.

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Devonian. Iowa.

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Devonian. Iowa.

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Devonian. Iowa.

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Devonian. Iowa.

Chemung group, White and Whitfield. Boston Soc. Nat. Hist., Proc., vol. viii 1861–62, p. 289. 1862.
Iowa.

Chemung group, Dawson. Am. Jour. Sci., 2d ser., vol. xxxv, pp. 314–319. 1863. Devonian. Canada.

Chemung, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 69. 1873. Devonian. Ohio.

Chemung, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxiv, p. 80. 1875. Devonian. New York.

Chemung, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 88–95. 1875. Devonian. Pennsylvania, New York. Exact syn. No. viii.

Chemung, Hotchkiss. A Geographical and Political Summary of Virginia, p. 22. 1876. Devonian. Virginia. Included in Devonian or Old Red Sandstone. Exact syn. Vergent (Formation ix, Rogers).

Chemung, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 526, 549. 1877. Devonian. Appalachian region. Exact syn. Vergent.

Chemung group, Stevenson. Am. Jour. Sci., 3d ser., vol. xv, pp. 423–430. 1878. Devonian. Pennsylvania. Part. syns. Ponent series and Vergent series.

Chemung, Newberry. Ohio Geol. Surv., vol. iii, p. 21. 1878. Carboniferous. Ohio, Pennsylvania.

Chemung group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, p. 289. 1881. Silurian.

Chemung, White. 2d Pa. Geol. Surv., Rept. G^5, pp. 73–79. 1881. Devonian. Pennsylvania. Includes Cascade sandstone. Part. syn. No. viii.

Chemung, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 27–29. 1881. Devonian. Pennsylvania.

Chemung, White. 2d Pa. Geol. Surv., Rept. Q^4, pp. 117–118. 1881. Devonian. Pennsylvania.

Chemung, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 104–106. 1882. Devonian. Pennsylvania. Included in No. viii.

Chemung group, Williams. Am. Jour. Sci., 3d ser., vol. xxv, pp. 97–104. 1883. Devonian. Mississippi Valley, New York.

Chemung, White. 2d Pa. Geol. Surv., Rept. G^7, pp. 67–83. 1883. Devonian. Pennsylvania. Includes Portage. Exact syn. No. viii.

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Silurian. Massachusetts.

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Silurian. Tennessee. Exact Syn. Trenton?

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Silurian. Georgia, Alabama.

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Tertiary. California.

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Tertiary, Cretaceous. Oregon, Washington.

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Cretaceous. California.

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Cretaceous. Mexico.

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Cretaceous. California.

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Cretaceous. California.

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Cretaceous.

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Trias. Massachusetts.

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Juratrias. Massachusetts. Included in Connecticut River sandstone.

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Juratrias. Massachusetts.

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Tennessee. Includes in Cambrian system (?).

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Silurian. Tennessee. Included in Potsdam group.

Chilhowee sandstones, Kerr. N. C. Geol. Surv., Rept. 1866–67, p. 29. 1869. North Carolina.

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Silurian. Tennessee. Included in Potsdam group.

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Cambrian. Tennessee. Exact syn. Potsdam sandstone.

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Silurian. Georgia. Included in Lower Primordial.

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Chilhowee, Walcott. U. S. Geol. Surv., Bull., No. 81, p. 251, 300. 1891.
Cambrian. Appalachian region. Included in Lower Cambrian. Exact syn. Granular quartz.

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Cambrian. Georgia. Included in Lower Cambrian.

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Tennessee. Included in Cambrian.

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Cambrian. Tennessee. Includes Sandsuck shale, Starr conglomerate, Cochran conglomerate, Nichols shale, Nebo sandstone, Murray shale.

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Tertiary. Florida. Included in Miocene.

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Tertiary. Florida. Included in Miocene.

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Algonkian. Wisconsin. Included in Upper Huronian. Part. syns. Penokee, Upper Marquette, Animikie.

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Cambrian. Pennsylvania. Included in No. 1. See Chikis quartzite.

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Alaska.

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Connecticut.

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Cretaceous. Texas. Included in Main street limestone.

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Devonian. Missouri. Included in Chemung.

Chouteau limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, p. 408. 1857.
Missouri. Included in Chemung group.

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Carboniferous? Illinois.

Chouteau limestone, Shumard. Mo. Geol. Surv. Repts., 1855–1871, pp. 45, 295. 1873.
Carboniferous. Missouri. Included in Chemung group. Lower Carboniferous.

Chouteau limestone, Meek. Mo. Geol. Surv. Repts., 1855–1871, p. 174. 1873.
Carboniferous. Missouri. Included in Lower Carboniferous.

Chouteau group, Broadhead. Mo. Geol. Surv. Rept., 1873–74, pp. 26–65. 1874.
Carboniferous. Missouri. Included in Lower Carboniferous, Mountain limestone. Includes Chouteau limestone, Vernicular sandstone, Lithographic limestone. Exact syns. Chemung group, Kinderhook group.

Chouteau group, Broadhead. St. Louis Acad. Sci., Trans., vol. iii, pp. 219, 220. 1878.
Carboniferous. Missouri. Includes Chouteau limestone, Vernicular sandstone, and the Lithographic limestone. Exact syn. Kinderhook group.

Chouteau, Rowley. Am. Geol., vol. iii, pp. 111–116. 1889.
Carboniferous. Missouri.

Chouteau, Ladd. Mo. Geol. Surv., Bull. No. 3, pp. 14, 15. 1890.
Lower Carboniferous. Missouri. Exact syn. Waverly.

Chouteau group, Williams. U. S. Geol. Surv., Bull., No. 80, p. 170. 1891.
Carboniferous. Included in Mississippian series. Includes Chouteau limestone, Vermicular sandstone, and Lithographic limestone.

Chouteau, Miller. Mo. Geol. Surv., Bull. No. 4, p. 6. 1891.
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Lower Carboniferous. Missouri. Included in Kinderhook beds.

Chouteau limestone, Keyes. Iowa Geol. Surv., vol. i, p. 56. 1893.
Carboniferous. Iowa. Included in Kinderhook.

Chouteau group, Broadhead. Am. Geol., vol. xii, p. 82. 1893.
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Chouteau limestone, Keyes. Mo. Geol. Surv., vol. iv, pp. 30, 50, 57, 76. 1894.
Lower Carboniferous. Missouri. Included in Kinderhook stage.

Chouteau limestone, Keyes. Mo. Geol. Surv., vol. vii, pt. ii, pp. 390, 395. 1894.
Lower Carboniferous. Missouri. Included in Kinderhook stage.

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Carboniferous. Mississippi Valley.

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Carboniferous. Missouri.

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Carboniferous. Missouri.

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Lower Carboniferous. Missouri. Included in Kinderhook stage.

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Carboniferous. Mississippi Valley.

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Algonkian. Arizona.

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Algonkian. Grand Canyon of Colorado. Included in Grand Canyon series.

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Algonkian. Grand Canyon region. Included in Grand Canyon series.

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Algonkian. Arizona. Included in Grand Canyon series.

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Algonkian. Colorado. Included in Grand Canyon group.

Churchill Arkose sandstone, Tyrrell. Can. Geol. Surv., new ser., vol. ix, p. 174F. 1898.
Cambrian. Hudson Bay region.

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Permian. Kansas. Includes Kiger division above and Salt Fork below, 10 formations.

Cimarron series, Prosser. Kan. Univ. Quart., vol. vi, pp. 150–151, 175. 1896.
Permian or Triassic? Kansas.

Cimarron series, Prosser. Kan. Univ. Geol. Surv., vol. ii, pp. 75–95. 1897.
Carboniferous. Kansas. Included in Permian? Includes Kiger and Salt Fork divisions, comprising Big Basin sandstone, Hackberry shales, Day Creek dolomite, Red Bluff sandstones, Dog Creek shales, Cave Creek gypsum, Flower-pot shales, Cedar Hill sandstones, Salt Plain measures and Harper sandstones. Upper Permian.

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Permian. Kansas.

Cimarron series, Cragin. Am. Geol., vol. xix, pp. 351–363. 1897.
Permian. Indian Territory, Kansas, Oklahoma. Includes Kiger and Salt Fork divisions.

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Ohio.

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Silurian. Illinois. Included in Lower Silurian. Includes Cape Girardeau limestone, and Thebes sandstone in southern Illinois.

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Silurian. Illinois.

Cincinnati group, Worthen. Ill. Geol. Surv., vol. iii, pp. 26–27, 117. 1868.
Silurian. Illinois.

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Indiana.

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Silurian. Illinois.

Cincinnati group, Bradley. Ill. Geol. Surv., vol. iv, pp. 200, 216, 233. 1870.
Silurian. Illinois.

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Silurian. Illinois.

Cincinnati group, Newberry. Ohio. Geol. Surv., Rept. Prog., 1869, p. 19. 1870.
Silurian. Ohio. Exact syn. Blue Limestone group.

Cincinnati group, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, pp. 12, 14. 1870.
Silurian. Ohio. Exact syn. Blue limestone.

Cincinnati group, Newberry. Ohio Geol. Surv., Rept. Prog., p. 14. 1871.
Silurian. Ohio.

Cincinnati group, Shaw. Ill. Geol. Surv., vol. v, pp. 35–56, 65–66, 77–78, 98–99, 110–111, 131–132, 152–154. 1873.
Silurian. Illinois.

Cincinnati group, Orton. Ohio. Geol. Surv., vol. i, pt. i, pp. 367, 437. 1873.
Silurian. Ohio. Includes Lebanon, Cincinnati, and Point Pleasant beds. Exact syns. Blue limestone, Hudson River.

Cincinnati, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 103, 116. 1873.
Silurian. Ohio. Includes Lebanon, Cincinnati, and Point Pleasant beds.

Cincinnati group, Miller. Cin. Quart. Jour. Sci., vol. i, pp. 97–115. 1874.
Silurian. Ohio Valley. Included in Ordovician.

Cincinnati group, Borden. Indiana Geol. Surv., 5th Ann. Rept. 1873, p. 137. 1874.
Indiana.

Cincinnati group, Broadhead. Mo. Geol. Surv., Rept., 1873–74, p. 28. 1874.
Silurian. Missouri. Included in Lower Silurian. Exact syns. Hudson River and Utica shales.

Cincinnati, Orton. Ohio. Geol. Surv., vol. ii, p. 662. 1874.
Silurian. Ohio.

Cincinnati group, Bradley. Am. Jour Sci., 3d ser., vol. ix, p. 281. 1875.
Silurian. Tennessee.

Cincinnati group, Shaler. Ky. Geol. Surv., new ser., vol. iii, pp. 149–159. 1877.
Silurian. Kentucky.

Cincinnati shales and limestone, Chamberlin. Geol. of Wisconsin, vol. ii, p. 314. 1877.
Lower Silurian. Wisconsin.

Cincinnati group, Newberry. Ohio Geol. Surv., vol. iii, p. 2. 1878.
Silurian. Ohio. Included in Lower Silurian.

Cincinnati group, Orton. Ohio Geol. Surv., vol. iii, pp. 382, 400, 406. 1878.
Silurian. Ohio. Exact syn. Blue limestone.

Cincinnati. Kansas City Rev., vol. ii, No. xi, p. 668. 1879.
Silurian. Ohio.

Cincinnati group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, p. 269. 1881.
Ordovician.

Cincinnati group, Foerste. Denison Univ. Sci. Lab., Bull., vol. i, p. 64, etc. 1885.
Ohio.

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Ordovician.

Cincinnati series, Orton. Ohio Geol. Surv., Prelim. Rept. Petroleum and Inflammable Gas, p. 19. 1886.
Ohio.

Cincinnati group, James. Cin. Soc. Nat. Hist., Jour., vol. x, No. 2, pp. 71, 77. 1887.
Ordovician. Ohio.

Cincinnati group, Foerste. Denison Univ. Sci. Lab., Bull., vol. iii, p. 3. 1888.
Ohio.

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Silurian. Arkansas.

Cincinnati, James. Am. Geol., vol. v, p. 335. 1890.
Silurian. Ohio and Mississippi Valley. Part. syn. Maquoketa.

Cincinnati group, James. Cin. Soc. Nat. Hist., Jour., vol. xiv, No. 2, p. 93. 1891.
Ordovician. Ohio.

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Lower Silurian.

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Silurian. Minnesota. Includes Maquoketa beds and Wykoff beds.

Cincinnati group, Hubbard. Indiana Acad. Sci., Proc., 1885–1891, p. 68. 1892.
Lower Silurian. Indiana.

Cincinnati group, Hershey. Science, vol. xxii, p. 202. 1893.
Silurian. Illinois.

Cincinnati formation, Foerste. Cin. Soc. Nat. Hist., Jour., vol. xviii, nos. 3, 4, p. 163. 1896.
Ordovician. Ohio.

Cincinnati, Winchell and Ulrich. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. iii, pt. ii, p. ci. 1897.
Lower Silurian. Minnesota. Exact syn. Hudson River.

Cincinnati group, Kindle. Indiana Dept. Geol. and Nat. Res., 22d Ann. Rept., 1897, p. 408. 1898.
Ordovician. Indiana.

Cincinnati beds, Newsom. Indiana Acad. Sci., Proc. 1897, p. 250. 1898.
Indiana.

Cincinnati rocks, Ashley. Indiana Dept. Geol. and Nat. Res., 23d Ann. Rept., 1898, p. 77. 1899.
Lower Silurian. Indiana.

Cincinnatian, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Silurian. New York. Includes Utica shale, Lorraine beds, Richmond beds.

Cisco division, Cummins. Texas Geol. Surv., 2d Ann. Rept., pp. 374–375. 1891.
Carboniferous. Texas. Included in Coal Measures.

Cisco division, Drake. Texas Geol. Surv., 4th Ann. Rept., pp. 402–421. 1893.
Carboniferous. Texas. Includes Santa Anna branch, No. 18, Horse Creek, Watts Creek, Camp Colorado, No. 13, Stockwether bed, Coon Mountain, Camp Creek, Saddle Creek, Waldrip, Chaffin, Parks Mountain, Lohn, Speck Mountain, Bellerophon, and Trickham beds.

Citadel series, Ells. Geol. Soc. Am., Bull., vol. i, p. 465. 1889.
Ordovician. Quebec. Included in Quebec group.

Citadel rocks, Bailey and McInnes. Can. Geol. Surv., new ser., vol. v, pt. i, pp. 5M–6M, 13M–14M. 1893.
Silurian. Canada. Included in Cambro-Silurian. Part. syn. Trenton-Utica.

Citico conglomerate, Walcott. Geol. Soc. Am., Bull., vol. v, p. 196. 1894.
Archean? Tennessee. Included in Ocoee.

Citico conglomerate, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 20. 1895.
Algonkian? Tennessee. Included in Ocoee series.

Citico conglomerate, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25. 1895, 1896.
Tennessee, North Carolina. Included in Ocoee group.

Claiborne deposits, Conrad. Phil. Acad. Nat. Sci., vol. vii, pp. 116–123. 1834.
Included in Eocene.

Claiborne sandstone, Conrad. Phil. Acad. Nat. Sci., Proc., vol. iii, pp. 280–281. 1846.
Mississippi. Included in Lower Eocene.

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Mississippi. Included in Eocene.

Claiborne group, Hilgard. Rept. on Geol. and Agric. Miss., pp. 123–128. 1860.
Eocene. Mississippi. Includes Siliceous Claiborne, Lignitic clays and sands of Northern Clarke County? Part. syns. Buhrstone, Claiborne, etc.

Claiborne group, Hilgard. Am. Jour. Sci., 2d ser., vol. xliii, p. 33. 1867.
Tertiary. Alabama, Mississippi. Exact syn. Claiborne group proper, or Calcareous Claiborne.

Claiborne, Mell. Am. Inst. Mg. Engrs., Trans., vol. viii, p. 304. 1880.
Tertiary. Alabama.

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Included in Eocene. Exact syn. Claiborne.

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Included in Tertiary, Eocene.

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Tertiary. Alabama.

Claiborne, Meyer. Am. Jour. Sci., 3d ser., vol. xxx, pp. 421–435. 1885.
Tertiary. Gulf region.

Claiborne, Smith. Am. Jour. Sci., 3d ser., vol. xxx, p. 272. 1885.
Tertiary. Gulf States.

Claiborne, Langdon. Am. Jour. Sci., 3d ser., vol. xxxi, p. 206. 1886.
Tertiary. Mississippi.

Claiborne group, Aldrich. Cin. Soc. Nat. Hist., Jour., vol. viii, p. 256. 1886.
Tertiary.

Claiborne, Aldrich. Ala. Geol. Surv., Bull., No. 1, p. 44. 1886.
Tertiary. Alabama.

Claiborne, Smith. Ala. Geol. Surv., Bull. No. 1, p. 8. 1886.
Tertiary. Alabama.

Claiborne, Smith and Johnson. U. S. Geol. Surv., Bull. No. 43, pp. 16, 18. 1887.
Tertiary. Alabama. Included in Middle Eocene.

Claiborne series, Langdon. Ga. Geol. Surv., 1st Rept. Prog., p. 96. 1891.
Tertiary. Georgia.

Claiborne division, Spencer. Ga. Geol. Surv., 1st Rept. Prog., p. 51. 1891.
Tertiary. Georgia. Included in Eocene.

Claiborne, Langdon. Geol. Soc. Am., Bull., vol. ii, p. 588. 1891.
Tertiary. Alabama. Included in Middle Eocene.

Claiborne division, Spencer. Ga. Geol. Surv., 1st Rept. Prog., 1890–91. 1891.
Tertiary. Georgia. Included in Middle Eocene.

Claiborne, Clark. U. S. Geol. Surv., Bull. No. 83, pp. 58, 62, 68. 1891.
Tertiary. Alabama, Mississippi. Included in Eocene.

Claiborne stage, Harris. Ark. Geol. Surv., 1892, vol. ii, p. 87. 1892.
Tertiary. Arkansas. Included in Eocene series.

Claiborne, Smith. Ala. Geol. Surv., Bull., No. 2, pp. 53, 62. 1892.

Tertiary. Alabama.

Claiborne, Smith, Johnson, and Langdon. Ala. Geol. Surv., Geol. of Coastal Plain of Alabama, pp. 122, 232, 385, 492, 494. 1894.

Tertiary. Alabama. Included in Eocene. Includes Claiborne, Buhrstone.

Claiborne stage, Lower, Vaughan. Am. Geol., vol. xv, p. 210. 1895.

Tertiary. Louisiana. Included in Eocene. Includes Mansfield group, Arcadia clays.

Claiborne, Lower, Vaughan. U. S. Geol. Surv., Bull. No. 142, p. 15. 1896.

Tertiary. Louisiana. Included in Eocene. Includes Jackson in part, Arcadia, Upper Lignitic in part, Marine Claiborne, Lower Claiborne in part, and Mansfield.

Claiborne-Meridian, McGee. U. S. Geol. Surv., 12th Ann. Rept., pt. i, p. 413. 1896.

Tertiary. Coastal Plain, Gulf States. Included in Eocene.

Claiborne, Lower, Vaughan. U. S. Geol. Surv., Bull. No. 142, p. 15. 1896.

Tertiary. Louisiana. Included in Eocene. Includes Ostrea sellæformis, Lisbon, Buhrstone, Calcareous and Siliceous Claiborne beds, Lerch's Jackson Arcadia, Upper Lignitic, Marine Claiborne, and Lower Lignitic, Mansfield group.

Claiborne sands, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 340. 1898.

Tertiary. Alabama. Included in Claibornian stage, Eocene.

Claiborne stage, lower, Harris and Veatch. La. State Exp. Sta., pt. v, p. 73. 1899.

Tertiary. Louisiana. Included in Eocene.

Claibornian stage, Vaughan. U. S. Geol. Surv., Mon., vol. xxxix, p. 27. 1900.

Tertiary. Gulf States.

Clarion group, Rogers. Geol. of Pa., vol. ii, pp. 490, 501, 572. 1858.

Carboniferous. Pennsylvania. Included in Coal Measures.

Clarion sandstone, Stevenson. 2d Pa. Geol. Surv., Rept. K^3, p. 43. 1878.

Carboniferous. Pennsylvania. Included in Lower Productive series. Exact syn. Piedmont sandstone.

Clarion sandstone, Platt. 2d Pa. Geol. Surv., Rept. H^5, p. 323. 1880.

Carboniferous. Pennsylvania.

Clarion group, Chance. Pa. Geol. Surv., Rept. V^2, pp. 49–56. 1880.

Carboniferous. Pennsylvania. Included in Lower Productive Measures.

Clarion coal, White. U. S. Geol. Surv., Bull. No. 65, p. 175. 1891.

Carboniferous. Ohio, Pennsylvania, West Virginia. Included in Lower Coal Measures, Allegheny River series. Includes Upper and Lower Clarion. Part. syn. Scrub-grass coal.

Clarion group, White. Geol. Soc. Am., Bull., vol. xi, pp. 148–150. 1900.

Carboniferous. Pennsylvania. Included in Allegheny series.

Clark, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 26. 1896.

Carboniferous. Virginia, West Virginia. Included in Pottsville series.

Clark formation, White. U. S. Geol. Surv., 20th Ann. Rept., pt. ii, p. 814. 1900.

Carboniferous. Virginia, West Virginia.

Clark County Littorals, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 79, 80. 1888.

Cretaceous. Arkansas. Included in Upper Arenaceous beds.

Clarke's Mill shale, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 969–970, 972. 1892.

Silurian. Pennsylvania. Included in No. vi. Includes Pentamerus limestone, Delthyris shale.

Clarksburg limestone, White. U. S. Geol. Surv., Bull. No. 65, p. 88. 1891.

Carboniferous. Pennsylvania, West Virginia. Included in Barren Measures, Elk River series.

Clarksburg formation, Van Hise and Bayley. U. S. Geol. Surv., 15th Ann. Rept., p. 604. 1895.
Algonkian. Lake Superior Region. Included in Upper Marquette series.

Clarksburg formation, Bayley. U. S. Geol. Surv., Mon., vol. xxviii, pp. 460–486. 1897.
Algonkian. Michigan. Included in Upper Marquette series.

Clay marl formation, Clark. N. J. State Geol., Rept., 1892, pp. 186–190. 1893.
Cretaceous. New Jersey.

Clayton, Smith, Johnson, and Langdon. Ala. Geol. Surv., Geol. of Coastal Plain of Alabama, pp. 192, 198, 240, 413, 489. 1894.
Tertiary. Alabama. Included in Eocene. Exact syn. Midway.

Clear Creek limestone, Worthen. Ill. Geol. Surv., vol. i, pp. 126–129. 1866.
Devonian and Upper Silurian. Illinois. Part. syn. Lower Helderberg limestone and Oriskany sandstone of New York.

Clear Creek, limestone, Worthen. Ill. Geol. Surv., vol. iii, pp. 24–25, 37–38. 1868.
Devonian. Illinois. Included in Oriskany group.

Clear Creek sandstone, Broadhead. Mo. Geol. Surv., Rept. 1873–74, pp. 69, 100. 1874.
Carboniferous. Missouri. Included in Coal Measures.

Clear Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept., pp. 392–394. 1893.
Carboniferous. Texas. Included in Canyon division.

Clear Creek limestone, Keyes. Mo. Geol. Surv., vol. iv, pp. 30, 41, 42. 1894.
Silurian. Missouri. Included in Niagara stage.

Clear Creek, Wheeler. Mo. Geol. Surv., vol. xi, p. 41. 1896.
Silurian. Missouri.

Clear Creek limestone, Schuchert. Geol. Soc. Am., Bull., vol. xi, p. 317. 1900.
Devonian. Illinois. Included in Oriskany.

Clear Fork, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, p. lxix. 1890.
Permian. Texas.

Clear Fork beds, Cummins. Texas Geol. Surv., 1st Ann. Rept., p. 188. 1890.
Permian. Texas.

Clear Fork beds, Cummins. Texas Geol. Surv., 2d Ann. Rept., pp. 401–402. 1891.
Permian. Texas.

Clear Fork division, Cummins. Texas Geol. Surv., 4th Ann. Rept., pp. 226–228. 1893.
Permian. Texas.

Clearwater shale, McConnell. Can. Geol. Surv., new ser., vol. v, pt. i, pp. 30D–32D, 55D–58D. 1893.
Cretaceous. Canada. Included in Colorado group.

Clepsydrops shale, Cope. U. S. Geol. and Geog. Surv. of Terr., Bull., vol. v, pp. 51–52. 1879.
Carboniferous. Illinois, Indiana.

Clermont limestone, Ashburner. 2d Pa. Geol. Surv., Rept. R^2, pp. 378–379. 1885.
Carboniferous. Pennsylvania.

Cleveland shale, Newberry. Ohio Geol. Surv., Rept. Prog. 1869, pp. 19, 21. 1870.
Carboniferous. Ohio.

Cleveland shale, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 22. 1871.
Carboniferous. Ohio. Included in Waverly group.

Cleveland shale, Read. Ohio Geol. Surv., vol. i, pp. 486, 514, 525. 1873.
Carboniferous. Ohio. Included in Waverly.

Cleveland shale, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 189, 208. 1873.
Carboniferous. Ohio. Included in Waverly.

Cleveland shale, Newberry. Ohio Geol. Surv., vol. ii, pp. 92–95, 188, 213. 1874.
Carboniferous. Ohio. Included in Waverly, Lower Carboniferous.

Cleveland shale, Winchell. Ohio Geol. Surv., vol. ii, pp. 242, 263, 282. 1874.
Carboniferous. Ohio. Included in Waverly.

Cleveland shale, Lesley. 2d Pa. Geol. Surv., Rept. I, p. 75. 1875.
Devonian. Ohio, Pennsylvania. Exact syn. No. viii.

Cleveland shale, Hicks. Am. Jour. Sci., 3d ser., vol. xvi, p. 70. 1878.
Carboniferous. Ohio. Included in Waverly.

Cleveland shale, Orton. Rev. of Strat. Geol. of eastern Ohio, p. 2. 1880.
Devonian. Ohio.

Cleveland shale, Orton. Ohio Geol. Surv., vol. vi, pp. 4, 26. 1888.
Devonian. Ohio. Included in Ohio shale.

Cleveland shale, Herrick. Denison Univ. Sci. Lab., Bull., vol. iv, p. 106. 1888.
Ohio.

Cleveland shale, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 21, 22. 1893.
Devonian. Ohio. Included in Ohio shale.

Cleveland County red sands, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 58–59. 1888.
Tertiary. Arkansas. Included in Camden series. Part. syn. Claiborne beds of Alabama and Mississippi.

Click series, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, p. lvii. 1890.
Archean. Texas. Included in Fernandan system.

Cliff limestone, Locke. Ohio Geol. Surv., 2d Ann. Rept., by W. W. Mather, p. 211. 1838.
Silurian. Ohio.

Cliff limestone, Owen. Rept. on Geol. of Iowa, Wis., and Ill., p. 19. 1839.
Mississippi Valley.

Cliff limestone, Clapp. Phil. Acad. Nat. Sci., Proc., vol. i, pp. 178, 316. 1843.
Silurian. Ohio. Includes Niagara, Marcellus.

Cliff limestone, Daniels. Wis. Geol. Surv., Rept., 1853, p. 12. 1854.
Silurian. Wisconsin. Includes Corraline beds.

Cliff limestone, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 20. 1870.
Ohio. Includes Salina and Lower Helderberg formations with two other limestones and a bed of sandstone overlying.

Cliff limestone, Orton. Ohio Geol. Surv., Rept. Prog., 1869, pp. 141, 150. 1870.
Ohio. Includes Clinton and Niagara groups.

Cliff limestone, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 15. 1870.
Silurian. Ohio. Includes Salina and Water lime.

Cliff limestone, Orton. Geol. Surv. Ohio, Rept. Prog., 1870, p. 295. 1871.
Silurian. Ohio.

Cliff limestone, Newberry. Ohio Geol. Surv., p. 15. 1871.
Silurian. Ohio. Includes Salina and Lower Helderberg limestones.

Cliff limestone, Foerste. Denison Univ. Sci. Lab., Bull., vol. i, p. 64. 1885.
Ohio.

Clifton limestone, Safford and Killebrew. Elementary Geol. of Tenn., pp. 144–146. 1876.
Silurian. Tennessee. Included in Upper Silurian. Exact syn. Meniscus limestone.

Clinch Mountain sandstone, Safford. Geol. Reconn. in the State of Tenn., 1st Rept., p. 157. 1856.
Silurian(?). Tennessee. Included in Dyestone and Gray limestone group.

Clinch Mountain sandstone, Safford. Geol. of Tenn., pp. 292–299. 1869.
Silurian. Tennessee. Included in Niagara group. Part. syn. Medina sandstone of New York.

Clinch Mountain sandstone, Killebrew and Safford. Resources of Tenn., p. 37. 1874.
Silurian. Tennessee. Included in Niagara period.

Clinch sandstone, Campbell. Geol. Soc. Am., Bull., vol. v, pp. 171, 176. 1894
Silurian. Virginia. Included in Medina, Oneida.

Clinch sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 12, 26. 1894, 1896.
Silurian. Kentucky, Virginia, Tennessee.

Clinch sandstone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 25, 27. 1896.
Silurian. Tennessee.

Clinch sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Silurian. Virginia, West Virginia.

Clinch sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio 59. 1899.
Silurian. Virginia, Tennessee.

Clingman conglomerate, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 16. 1895.
Tennessee, North Carolina. Included in Ocoee group.

Clinton group, Vanuxem. Geol. of New York, pt. iii, pp. 79–90. 1842.
Paleozoic. New York. Includes Ferriferous slate and sandrock, No. 5 Pennsylvania survey. Part. syn. Protean group.

Clinton, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, p. 230. 1842.
Included in Lower Silurian.

Clinton group, Hall. Geol. of New York, pt. iv, 4th Geol. Dist., pp. 18, 58–79. 1843.
Paleozoic. New York. Includes Pentamerus limestone of Clinton group. Exact syn. Protean, Ferriferous slate and sand rock.

Clinton group, Emmons. Agric. of New York, vol. i, pp. 144–150. 1846.
New York. Included in Ontario division of New York system.

Clinton group, Emmons. Agric. of New York, vol. i, pp. 144–150. 1846.
Silurian. New York. Included in Ontario division of New York system. Exact syns. Protean group, Ferriferous slate and sand rock.

Clinton group, Hall. Foster and Whitney's Rept. on Geol. of Lake Superior Dist., pt. ii, p. 152. 1851.
Silurian. Lake Superior region.

Clinton group, Hall. Paleontology of New York, vol. ii, pp. 2–4, 15–17. 1852.
Silurian. New York.

Clinton group, Hall. Am. Jour. Sci., 2d ser., vol. xvii, p. 192. 1854.
Silurian. Michigan.

Clinton formation, Logan. Can. Geol. Surv., Rept., 1843–63, pp. 310–321. 1863.
Silurian. Canada (Western). Included in Anticoste group.

Clinton formation, Bell. Can. Geol. Surv., Rept. 1866–69, pp. 127–128. 1871.
Silurian. Canada.

Clinton, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 62, 103, 126. 1873.
Silurian. Ohio.

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Silurian. Ohio.

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Archean. New Brunswick. Included in Laurentian (?).

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Carboniferous. Rhode Island.

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Tertiary. Louisiana. Included in Eocene.

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Tertiary. Louisiana. Included in Eocene. Exact syn. Claiborne sands of Alabama.

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Silurian. Pennsylvania. Included in Lower Silurian, No. ii (?).

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Cretaceous. Tennessee. Exact syn. Tombigbee sand.

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Archean. New Brunswick. Included in Huronian.

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Tertiary. British Columbia. Exact syn. Oligocene.

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Carboniferous. Michigan. Part. syns. Waverly and Cuyahoga.

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Carboniferous. Michigan.

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Carboniferous. Michigan. Exact syn. Cuyahoga.

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Carboniferous. Texas. Included in Upper Carboniferous.

Coleman beds, Tarr. Texas Geol. Surv., Bull. No. 3, pp. 14-15. 1892.
Carboniferous. Texas.

Coleman bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p, 424. 1893.
Carboniferous. Texas. Included in Albany division.

Coles Brook limestone, Emerson. U. S. Geol. Surv., Mon., vol. xxix, p. 27. 1898.
Algonkian. Massachusetts.

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Pre-Cambrian. Massachusetts.

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Silurian. Tennessee. Included in Nashville formation.

Collinsville limestone, Worthen. Econ. Geol. of Ill., vol. iii, p. 332. 1882.
Carboniferous. Illinois. Included in Coal Measures.

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Cretaceous. Colorado. Exact syn. Cretaceous, No. 2.

Colorado, Hague. U. S. Geol. Explor. of 40th Parallel, vol. ii, pp. 28, 41-45. 1877.
Cretaceous. Colorado. Includes Fort Benton, Niobrara, and Fort Pierre.

Colorado group, King. U. S. Explor. of 40th Parallel, vol. i, pp. 305-320. 1878.
Cretaceous. Colorado, Wyoming, Utah.. Includes Fort Benton (Cretaceous, No. 2), Niobrara (Cret. No. 3), and Fort Pierre (Cret. No. 4).

Colorado, White. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 19, 22, 30. 1878.
Cretaceous. Utah, Colorado.

Colorado, Endlich. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 75, 109, 126. 1878.
Cretaceous. Colorado.

Colorado, Stevenson. Chief of Engineers' Rept., 1879, pt. iii, p. 2254. 1879.
Cretaceous. New Mexico. Includes Fort Benton, Niobrara, and Fort Pierre.

Colorado, Endlich. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., pp. 85, 87, 109, 122. 1879.
Cretaceous. Wyoming.

Colorado group, Stevenson. U. S. Geog. and Geol. Surv. of 100th M., vol. iii, Suppl., p. 95. 1881.
Cretaceous. Colorado, New Mexico. Includes Fort Benton, Niobrara, and Fort Pierre of Meek and Hayden, Nos. 2, 3, 4, and Middle Cretaceous of Newberry.

Colorado group, Dutton. U. S. Geol. Surv., 6th Ann. Rept., pp. 136–140. 1885.
Cretaceous. NW. New Mexico. Includes Dakota sandstone, and Colorado shales.

Colorado, White. U. S. Geol. Surv., Bull. No. 82, pp. 158, 261. 1891.
Cretaceous. Rocky Mts. Includes Niobrara and Fort Benton. Exact syns. Austin limestone and Eagle Ford shale.

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Cretaceous. Colorado.

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Cretaceous. Montana.

Colorado, Stanton. U. S. Geol. Surv., Bull. No. 106. 1893.
Cretaceous. Rocky Mountains.

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Cretaceous. Montana. Includes Benton and Niobrara.

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Cretaceous. Colorado.

Colorado, Bain. Iowa Geol. Surv., vol. v, pp. 273–275. 1896.
Cretaceous. Iowa. Includes Benton and Niobrara.

Colorado, Peale. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 24. 1896.
Cretaceous. Montana

Colorado, Emmons, Cross, and Eldridge. U. S. Geol. Surv., Mon., vol. xxvii, pp. 26, 64. 1896.
Cretaceous. Colorado. Includes Benton, Niobrara.

Colorado, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 30. 1896.
Cretaceous. Wyoming. Includes Benton and Niobrara.

Colorado group, Weed and Pirsson. U. S. Geol. Surv., Bull. No. 139, p. 45. 1896.
Cretaceous. Montana. Includes Benton and Niobrara.

Colorado, Bain. Iowa Geol. Surv., vol. viii, pp. 330–335. 1898.
Cretaceous. Iowa.

Colorado formation, Spurr. U. S. Geol. Surv., Mon., vol. xxxi, pp. 41–42. 1898.
Cretaceous. Colorado. Includes Benton shales and Niobrara limestone.

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Cretaceous. Montana.

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Cretaceous. Yellowstone Park.

Colorado formation, Logan. Jour. of Geol., vol. vii, pp. 83–91. 1899.
Cretaceous. Kansas and Nebraska. Includes Fort Benton and Niobrara.

Colorado formation, Todd. U. S. Geol. Surv., Water-Supply paper, No. 34, p. 15. 1900.
Cretaceous. South Dakota.

Columbia formation, McGee. U. S. Geol. Surv., 7th Ann. Rept., p. 594. 1888.
Pleistocene. Maryland.

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Pleistocene. Atlantic Coast region.

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Pleistocene. Atlantic Coastal Plain.

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Pleistocene. Atlantic Coastal Plain.

Columbia, McGee. Am. Assoc. Adv. Sci., Proc., vol. xxxix, p. 245. 1891.
Pleistocene. Mississippi Valley.

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Pleistocene. District of Columbia.

Columbia, Darton. Geol. Soc. Am., Bull., vol. ii, p. 432. 1891.
Pleistocene. Virginia, Maryland.

Columbia series, Spencer. Ga. Geol. Surv., 1st Rept. of Prog., pp. 61–72. 1891.
Tertiary. Georgia.

Columbia, Darton. U. S. Geol. Surv., Baltimore, Md., Geologic sheet. 1892.
Pleistocene. Maryland.

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Pleistocene. Maryland.

Columbia, McGee, Darton, Williams. Int. Cong. Geol., 5th sess., pp. 232–233, 246. 1893.
Pleistocene. Maryland, District of Columbia.

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Maryland.

Columbia, Darton. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 13, 23. 1894, 1896.
Pleistocene. Virginia, Maryland.

Columbia, Hershey. Am. Geol., vol. xv, p. 7. 1895.
Pleistocene. Illinois. Includes Florence gravel, Valley loess, Upland loess.

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Pleistocene. Missouri.

Columbia, Darton. U. S. Geol. Surv., Bull. No. 138, pp. 119, 126, 164, 210. 1896.
Pleistocene. Atlantic Coastal Plain.

Columbia formation, Clark. Md. Geol. Surv., vol. i, p. 199. 1897.
Pleistocene. Maryland.

Columbia formation, Spencer. Geol. Soc. Am. Bull., vol. ix, p. 25. 1897.
Pleistocene. Mexico.

Columbus limestone, Mather. Rept. State House Artesian Well at Columbus, Ohio, p. 6. 1859.
Ohio.

Columbus limestone, Orton. Ohio Geol. Surv., vol. vi, p. 763. 1888.
Ohio.

Columbus limestone, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept. p. 25. 1890.
Devonian. Ohio. Included in Upper Helderberg limestone. Exact syn. Lower Corniferous.

Columbus beds, Brownocker. Denison Univ. Sci. Lab., Bull., vol. ii, Art. ii, p. 13. 1898.
Devonian. Ohio.

Colvins Run limestone, White. U. S. Geol. Surv., Bull., No. 65, p. 39. 1891.
Carboniferous. Pennsylvania. Included in Permo-Carboniferous, Dunkard Creek series. Exact syn. Limestone 1 (a), Stevenson.

Comanche series, Hill. Am. Jour. Sci., 3d ser., vol. xxxiii, p. 298, 1887; vol. xxxiv, p. 299, 1887.

Comanche series, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 67, 110–116, 126. 1888.
Cretaceous. Arkansas. Includes Washita, Fredericksburg, and Trinity divisions.

Comanche series, Hill. Texas Geol. Surv., 1st Ann. Rept., pp. 116–141. 1890.
Cretaceous. Texas. Included in Lower Cretaceous. Includes Trinity sands, Fredericksburg division, Comanche Peak subdivision, Caprina chalk, Washita division, Austin marble, Fort Worth limestone, Shoal Creek limestone, and Denison beds.

Comanche series, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, pp. i–iv. 1890.

Cretaceous. Texas. Includes Washita, Fredericksburg, and Trinity divisions.

Comanche series, Hill. Geol. Soc. Am., Bull., vol. ii, p. 503. 1891.

Cretaceous. Texas.

Comanche, White. U. S. Geol. Surv., Bull., No. 82, pp. 119, 253. 1891.

Cretaceous. Texas.

Comanche series, Hill. Am. Jour. Sci., 3d ser., vol. xlv, pp. 313–318. 1893.

Cretaceous. Mexico, Texas.

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Cretaceous. Kansas, Oklahoma, and New Mexico.

Comanche series, Stanton. Jour. of Geol., vol. v, pp. 599–610. 1897.

Cretaceous. Included in Lower Cretaceous.

Comanche series, Prosser. Kan. Univ. Geol. Surv., vol. ii, pp. 96–181. 1897.

Lower Cretaceous. Kansas. Includes Cheyenne sandstone and Kiowa shales.

Comanche series, Gould. Am. Jour. Sci., 4th ser., vol. v, pp. 169–175. 1898.

Cretaceous. Kansas. Includes Kiowa shales and Cheyenne sandstone.

Comanche series, Vaughan. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 64. 1900.

Cretaceous. Texas. Includes Glen Rose formation, Comanche Peak limestone, Edwards limestone, Georgetown limestone, Del Rio clay, Buda limestone.

Comanche Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 385. 1893.

Carboniferous. Texas. Included in Strawn division.

Comanche Peak group, Shumard. St. Louis Acad. Sci., Trans., vol. i, pp. 583, 584. 1857.

Cretaceous. Texas.

Comanche Peak group, Marcou. Boston Soc. Nat. Hist., Proc., vol. viii, 1861–62, p. 89. 1861.

Cretaceous. Texas. Included in Upper Cretaceous.

Comanche Peak bed, Hill. Texas Geol. Surv., 1st Ann. Rept., pp. 123–124. 1890.

Cretaceous. Texas. Included in Fredericksburg division of Comanche series.

Comanche Peak division, Hill. Geol. Soc. Am., Bull., vol. ii, pp. 503, 512. 1891.

Cretaceous. Texas.

Comanche Peak limestone, Taff. Texas Geol. Surv., 3d Ann. Rept., pp. 340. 1892.

Cretaceous. Texas. Included in Fredericksburg division of Lower Cretaceous.

Comanche Peak series, Dumble and Cummins. Am. Geol., vol. ix, p. 349. 1892.

Cretaceous. Texas.

Comanche Peak chalk, Hill. Artesian Invest., Final Rept., pt. iii, p. 86, 52d Cong., 1st sess., Ex. Doc. 41, pt. iii. 1892.

Cretaceous. Texas. Included in Trinity division.

Comanche Peak limestone, Taff. Texas Geol. Surv., 4th Ann. Rept., pp. 256–257. 1893.

Cretaceous. Texas. Included in Fredericksburg division of Lower Cretaceous.

Comanche Peak beds, Hill. Geol. Soc. Am., Bull., vol. v, p. 302. 1894.

Cretaceous. Texas. Includes Goodland and Walnut.

Comanche Peak stage, Dumble. Geol. Soc. Am., Bull., vol. vi, p. 378. 1895.

Cretaceous. Texas. Included in Lower Cretaceous.

Comanche Peak limestone, Hill and Vaughan. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 226. 1898.

Cretaceous. Texas. Included in Fredericksburg division of Comanche series.

Comanche Peak formation, Hill and Vaughan. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 42. 1898.

Cretaceous. Texas. Included in Comanche series

Comanche Peak limestone, Vaughan. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 64. 1900.
Cretaceous. Texas. Included in Comanche series.

Comet Creek bed, Hill. Am. Jour. Sci., 3d ser., vol. l, pp. 228–229. 1895.
Cretaceous. Oklahoma. Included in Comanche.

Como stage, Knight. Geol. Soc. Am., Bull., vol. xi, pp. 383–385. 1900.
Jurassic. Wyoming.

Conanicut arkose, Shaler, Woodworth, and Foerste. U. S. Geol. Surv., Mon., vol. xxxiii, p. 380. 1889.
Carboniferous. Rhode Island.

Conasauga shale, Hayes. Geol. Soc. Am., Bull., vol. ii, p. 143. 1890.
Ordovician (?). Tennessee. Exact syn. Knox shale.

Conasauga, Walcott. U. S. Geol. Surv., Bull., No. 81, p. 246. 1891.
Cambrian. Georgia. Exact syn. Knox shale, Montevallo, Choccolocco.

Conasauga shale, Hayes. Ala. Geol. Surv., Bull., No. 4, pp. 34, 39. 1892.
Cambrian. Alabama.

Conasauga shale, Hayes. Geol. Soc. Am., Bull., vol. v, p. 467. 1894.
Cambrian. Georgia.

Conasauga shale, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 2, 4, 6, 20, 35. 1894–95, 1896.
Cambrian. Georgia, Tennessee.

Conasauga shale, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 35. 1896.
Cambrian. Alabama. Exact syns. Montevallo or Choccolocco shale, Knox shale.

Conasauga shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Cambrian. Tennessee. Includes Nolichucky shale and Marysville limestone. Exact syn. Knox shale.

Conasauga shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 25. 1896.
Cambrian. Tennessee.

Conception slates, Walcott. Geol. Soc. Am., Bull., vol. x, p. 220. 1899.
Algonkian. Newfoundland. Included in Avalon terrane.

Concretionary limestone, Worthen. Iowa Geol. Surv., vol. i, pt. i, pp. 190–191, 201, 215–216, 226–227, 236–237, 242–243, 254–255. 1858.
Carboniferous. Iowa.

Concretionary limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 55. 1890.
Carboniferous. Arkansas. Included in Lower Carboniferous.

Conemaugh formation, O'Harra. Md. Geol. Surv., Allegany County, p. 118. 1900.
Carboniferous. Maryland.

Conemaugh formation, Clark. Md. Geol. Surv., Phys. Atlas of Md., Allegany County. 1900.
Carboniferous. Maryland.

Conglomerate series, Fontaine. Am. Jour. Sci., 3d ser., vol. vii, pp, 463–465. 1874.
Carboniferous. West Virginia.

Conglomerate series, Fontaine. Am. Jour. Sci., 3d ser., vol. xi, p. 374. 1876.
Carboniferous. West Virginia.

Conglomerate Measures, White. 2d Pa. Geol. Surv., Rept. Q, pp. 33–58. 1880.
Carboniferous. Pennsylvania. Includes Homewood sandstone, Mercer shales, Connoquenessing sandstone, Sharon conglomerate. Exact syn. No. xii.

Conglomerate group, Orton. Ohio Geol. Surv., vol. vi, p. 43. 1888.
Carboniferous. Ohio. Includes Homewood sandstone, Upper Mercer group, Lower Mercer group, Massillon sandstone, Upper Massillon sandstone, Lower Sharon conglomerate.

Conglomerate group, Squire. Ala. Geol. Surv., Rept. on Cahaba Coal field, pp. 14 et seq. 1890.
Carboniferous. Alabama. Included in Coal Measures.

onglomerate group, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 43–44. 1890.

Carboniferous. Ohio. Includes Homewood sandstone, Mercer group, Massillon sandstones, and Sharon conglomerate.

Connecticut River sandstone, Hitchcock. Am. Assoc. Adv. Sci., Proc., vol. ix, p. 225. 1855.

Juratrias. Massachusetts.

Connecticut River sandstone, Emmons. St. Louis Acad. Sci., Trans., vol. i, p. 102. 1857.

Connecticut.

Connecticut sandstone, Hitchcock. Science, new ser., vol. i, pp. 74–77. 1895.

Juratrias. Connecticut. Exact syn. Newark or Connecticut River sandstone.

Connecticut River sandstone, Emerson. U. S. Geol. Surv., Mon., vol. xxix, pp. 351–406. 1898.

Juratrias. Massachusetts. Included in Trias. Includes Sugar Loaf arkose, Mount Toby conglomerate, Longmeadow brownstone, Chicopee shale, Granby tuff, Holyoke, Deerfield, and Black Rock beds. Part. syn. Newark.

Connellsville sandstone, Platt. 2d Pa. Geol. Geol. Surv., Rept. H^4, p. 312. 1878.

Carboniferous. Pennsylvania.

Connellsville sandstone, White. U. S. Geol. Surv., Bull. No. 65, p. 87. 1891.

Carboniferous. Pennsylvania, West Virginia. Included in Barren Measures, Elk River series.

Connellsville sandstone, White. Geol. Soc. Am., Bull., vol. iii, p. 189. 1892.

Upper Carboniferous. West Virginia. Included in Elk River series.

Connoquenessing sandstone, Platt. 2d Pa. Geol. Surv., Rept. H^5, p. 325. 1880.

Carboniferous. Pennsyivania.

Connoquenessing sandstone, White. U. S. Geol. Surv., Bull. No. 65, p. 201. 1891.

Carboniferous. Ohio and Pennsylvania. Included in Pottsville conglomerate series. Part. syn. Massillon sandstone.

Connoquenessing sandstone, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1911. 1895.

Carboniferous. Pennsylvania. Exact syn. Massillon sandstone of Ohio.

Conshohocken clay, Hopkins. Geol. Soc. Am., Bull., vol. x, pp. 480–484. 1900.

Pennsylvania.

Contra Costa lake bed, Cooper. Cal. Acad. Sci., Proc., 1893–94, 2d series, vol. iv, p. 169. 1895.

Pliocene. California. Included in Pliocene fresh-water beds.

Conway schist, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Hawley sheet. 1892.

Silurian. Massachusetts.

Conway schists, Emerson. Geol. Soc. Am., Bull., vol. vii, p. 5. 1895.

Ordovician? Massachusetts.

Conway schists, Emerson. U. S. Geol. Surv., Mon., vol. xxix, pp. 177–200. 1898.

Silurian. Massachusetts.

Conway schist, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 50. 1898.

Silurian. Massachusetts.

Cook Inlet gravels, Spurr. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 174–175. 1900.

Pleistocene. Alaska.

Cook's Mountain beds, Dumble. Texas Geol. Surv., Rept. on brown coal, pp. 141–143. 1892.

Tertiary. Texas. Included in Timber Belt division of Eocene.

Cook's Mountain series, Kennedy. Texas Geol. Surv., 3d Ann. Rept., pp. 54–57. 1892.
Tertiary. Texas. Included in Timber Belt beds of Eocene.

Coon Mountain bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 417. 1893.
Carboniferous. Texas. Included in Cisco division.

Cooper marble, Meek. Mo. Geol. Surv., Repts. 1855–1871, p. 176. 1873.
Carboniferous. Missouri.

Cooper River beds, Pratt. Ashley river phosphates. 1868.
Tertiary. South Carolina. Included in Eocene.

Cooper River beds, Holmes. Phosphate Rock of South Carolina. 1878.
Tertiary. South Carolina. Included in Eocene. Part. syn. Eocene marl.

Cooper River marls, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 342. 1898.
Tertiary. South Carolina. Included in Vicksburgian stage, Oligocene.

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New Hampshire. Includes Calciferous mica schists.

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Dun limestone, Hay. Kan. Acad. Sci., Trans., vol. x, p. 7. 1887.
Carboniferous. Kansas. Exact syn. Humboldt limestone.

Dundee limestone, Lane. Mich. Geol. Surv., Rept. State Board for 1891–92, p. 66. 1893.
Devonian. Michigan.

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Devonian. Michigan.

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Silurian. Ohio.

Dundee limestone, Lane. U. S. Geol. Surv., Water-Supply papers, No. 30, pl. vi. 1899.
Devonian. Michigan. Exact syn. Upper Helderberg.

Dundee limestone, Sherzer. Mich. Geol. Surv., vol. vii, pt. i, pp. 35–42, 226–228. 1900.
Devonian. Michigan.

Dunkard Creek series, White. U. S. Geol. Surv., Bull., No. 65, p. 20. 1891.
Carboniferous. Ohio, Pennsylvania, and West Virginia. Included in Permo-

Carboniferous. Includes Windy Gap limestone, Gilmore sandstone, Nineveh sandstone and limestone, Fish Creek sandstone, and Jollytown limestone, Upper, Middle, and Lower Washington limestone, Mariett asandstone, Blackville limestone, Washington sandstone, Colvins Run limestone, Mount Morris limestone, Waynesburg sandstone, and Cassville plant shale.

Dunkard Creek, White. Geol. Soc. Am., Bull., vol. iii, p. 189. 1892.
Permian. West Virginia.

Dunkard formation, O'Harra. Md. Geol. Surv., Allegany County, p. 128. 1900.
Permian. Maryland.

Dunlap limestone, Kirk. Kan. Univ. Geol. Surv., vol. i, pp. 81, 83. 1896.
Carboniferous. Kansas.

Dunvegan sandstone, Dawson. Am. Jour. Sci., 3d ser., vol. xxi, p. 392. 1881.
Cretaceous. Canada. Exact syn. Niobrara.

Dunvegan group, Dawson. Can. Geol. Surv., Rept. 1879–80, pp. 116B–122B. 1881.
Cretaceous. British Columbia, Canada. Included in Cretaceous, Colorado group. Includes Dunvegan sandstones. Exact syns. Lower sandstones and shales. Part. syns. Belly River series, Bear River formation, Niobrara.

Dunvegan group, McConnell. Can. Geol. Surv., new ser., vol. v, pt. i, pp. 50D, 54D–55D. 1893.
Cretaceous. Canada. Part. syn. Belly River series, Bear River beds (Wyoming).

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Tertiary. North Carolina.

Duplin beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 338. 1898.
Tertiary. North Carolina.

Dyestone and gray limestone group, Safford. Geol. Reconn. of the State of Tenn., 1st Rept., pp. 156–158. 1856.
Devonian and Silurian. Tennessee. Included in Upper Silurian and Devonian. Includes Sneedville limestone and Clinch Mountain limestone.

Dyestone group, Safford. Geol. of Tenn., pp. 302–311. 1869.
Silurian. Tennessee. Included in Niagara group. Part. syn. Clinton. [Medina in part (?).]

Dyestone group, Killebrew and Safford. Resources of Tenn., p. 38. 1874.
Silurian. Tennessee. Included in Niagara period.

Eagle limestone, White. U. S. Geol. Surv., Bull. No. 65, p. 177. 1891.
Carboniferous. West Virginia. Included in Lower Coal Measures, Allegheny River series.

Eagle formation, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 55. 1899.
Cretaceous. Montana.

Eagle Ford shale, Hill. Am. Jour. Sci., 3d ser., vol. xxxiii, p. 298. 1887.
Cretaceous. Texas. Included in Gulf series.

Eagle Ford shales, White. Phil. Acad. Nat. Sci., Proc., 1887, p. 40. 1887.
Texas. Included in Cretaceous. Gulf series. Exact syns. Tombigbee sand, Lower part of Colorado group.

Eagle Ford shales, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, p. xlvii. 1890.
Cretaceous. Texas. Included in Black Prairie series.

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Cretaceous. Texas. Included in Black Prairie series.

Eagle Ford formation, White. U. S. Geol. Surv., Bull. No. 82, p. 122. 1891.
Cretaceous. Texas.

Eagle Ford division, Taff. Texas Geol. Surv., 2d Ann. Rept., pp. 734–735. 1891.
Cretaceous. Texas. Included in Upper Cretaceous. Exact syn. Benton shale.

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Cretaceous. Texas. Included in Upper Cretaceous.

Eagle Ford shales, Hill. Artesian Invest., Final Rept., pt. iii, p. 70, 52d Cong., 1st sess., Ex. Doc. 41. 1892.

Cretaceous. Southwest. Exact syn. Benton clay.

Eagle Ford formation, Taff. Texas Geol. Surv., 4th Ann. Rept., pp. 299–304. 1892.

Cretaceous. Texas. Included in Upper Cretaceous.

Eagle Ford shale, Hill. Geol. Soc. Am., Bull., vol. v, pp. 297, 305. 1894.

Cretaceous. Texas.

Eagle Ford stage, Dumble. Geol. Soc. Am., Bull., vol. vi, p. 377. 1895.

Cretaceous. Texas. Included in Upper Cretaceous.

Eagle Ford shales, Hill and Vaughan. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 239. 1898.

Cretaceous. Texas. Included in Colorado division of Gulf series.

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Cretaceous. Texas. Included in Gulf series.

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Cretaceous. Texas.

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Cretaceous. Texas. Exact syn. Ripley formation.

Eagle Pass division, Dumble. Geol. Soc. Am., Bull., vol. iii, pp. 219, 224. 1892.

Cretaceous. Texas. Included in Upper Cretaceous. Includes Upson clays, San Miguel, Coal series, Escondido beds.

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Cretaceous. Texas.

Eagle Pass formation, Hill and Vaughan. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 241. 1898.

Cretaceous. Texas. Included in Montana division of Gulf series.

Eagle Pass formation, Vaughan. U. S. Geol. Surv., Bull., No. 164, p. 21. 1900.

Cretaceous. Texas. Includes San Miguel beds, Escondido beds.

Earlham limestone, Tilton and Bain. Iowa Geol. Surv., vol. vii, pp. 511–517. 1897.

Carboniferous. Iowa. Included in Bethany limestone.

Earlham limestone, Bain. Am. Jour. Sci., 4th ser., vol. v, pp. 435, 436, 439. 1898.

Carboniferous. Missouri. Included in Bethany limestone.

Earlton limestone, Haworth. Kan. Univ. Geol. Surv., vol. iii, pp. 51, 103. 1898.

Carboniferous. Kansas. Included near summit of Thayer shale.

East Lee gneiss, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Hawley sheet. 1892.

Algonkian. Massachusetts. Part. syn. Stamford gneiss.

East Lee limestone, Emerson. U. S. Geol. Surv., Bull. No. 159, p. 50. 1899.

Pre-Cambrian. Massachusetts.

Eastern sandstone, Hubbard. Mich. Geol. Surv., vol. vi, pt. ii, p. 110. 1878.

Algonkian. Michigan.

Eastern sandstone, Irving and Chamberlin. U. S. Geol. Surv., Bull. No. 23. p. 106. 1885.

Cambrian. Michigan. Exact syn. Potsdam.

Eastern sandstone, James. Cin. Soc. Nat. Hist., Jour., vol. xvii, No. ii, p. 127. 1894.

Ordovician.

Eastern sandstone, Hubbard. Mich. Geol. Surv., vol. vi, pt. ii, pp. 110–125. 1898.

Michigan.

Eaton beds, Foerste. Denison Univ. Sci. Lab., Bull., vol. iii, p. 8. 1888.

Ohio.

Eau Claire grit, Wooster. Geol. of Wisconsin, vol. iv, p. 110. 1882.
Cambrian. Wisconsin. Included in Potsdam sandstone.

Ecphora bed, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, p. 124. 1892.
Tertiary. Florida. Included in Miocene.

Edison gneiss, Wolff and Brooks. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 439. 1898.
Pre-Cambrian. New Jersey.

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Canada. Included in Laramie.

Edwards limestone, Hill and Vaughan. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, pp. 227–235. 1898.
Cretaceous. Texas. Included in Fredericksburg division of Comanche series. Exact syn. Caprina limestone, Barton Creek limestone.

Edwards formation, Hill and Vaughan. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 42. 1898.
Cretaceous. Texas. Included in Comanche series.

Edwards limestone, Vaughan. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 64. 1900.
Cretaceous. Texas. Included in Comanche series.

Egremont limestone, Hobbs. Jour. of Geol., vol. i, pp. 727–728. 1893.
Ordovician. Massachusetts. Included in Mount Washington series.

Einstine sandstone, Swallow and Hawn. Geol. of Miami County, Kans. 1865.
Carboniferous. Kansas. Included in Coal Measures.

Elevator B sandstone, Hall. Minn. Acad. Nat. Sci., Bull., vol. ii, no. i, p. 132. 1889.
Cambrian. Minnesota. Included in Shakopee.

Elevator sandstone, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, p. 341. 1892.
Ordovician (?). Minnesota. Included in Magnesian series.

Elgin sandstone, Haworth. Kan. Univ. Geol. Surv., vol. iii, p. 64. 1898.
Carboniferous. Kansas.

Elk group, Carll. 2d Pa. Geol. Surv., Rept. I^5, pp. 78–79. 1890.
Devonian. Pennsylvania.

Elk Creek beds, Cragin. Am. Geol., vol. xvi, p. 366. 1895.
Cretaceous. Kansas. Includes Lanphier beds, Stokes sandstone.

Elk Falls limestone, Haworth. Kan. Univ. Geol. Surv., vol. iii, pp. 65–66, 105. 1898.
Carboniferous. Kansas. Includes Lecompton and Deer Creek limestone.

Elkgarden, Darton and Taff. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 28. 1896.
Carboniferous. West Virginia and Maryland.

Elkgarden formation, Clark. Md. Geol. Surv., vol. i, p. 156, 187. 1897.
Carboniferous. Maryland.

Elk Lick limestone, White. 2d Pa. Geol. Surv., Rept. Q, p. 29. 1878.
Carboniferous. Pennsylvania. Included in Lower Barren series.

Elk Lick limestone, White. U. S. Geol. Surv. Bull. No. 65, p. 90. 1891.
Carboniferous. Pennsylvania. Included in Barren Measures, Elk River series.

Elk Lick Coal, White. U. S. Geol. Surv., Bull. No. 65, p. 89. 1891.
Carboniferous. Ohio, Pennsylvania, West Virginia. Included in Barren Measures, Elk River series.

Elk Mountain shale, White. 2d Pa. Geol. Surv., Rept. G^5, p. 64. 1881.
Devonian. Pennsylvania. Included in Catskill.

Elk Mountain gray shale, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 1579. 1892.
Devonian. Pennsylvania. Included in Catskill, No. ix.

Elk Mountain sandstone and shale, Prosser. U. S. Geol. Surv., Bull. No. 120, p. 78. 1894.
Devonian. New York, Pennsylvania. Included in Catskill (Upper Devonian).

Elk River series, White. U. S. Geol. Surv., Bull. No. 65, p. 70. 1891.
Carboniferous. Ohio, Pennsylvania, and West Virginia. Includes Pittsburg limestone, Connellsville sandstone, Clarksburg limestone, Morgantown sandstone, Elk Lick limestone, Crinoidal, Green fossiliferous or Ames limestone, Red Shale beds, Cambridge limestone, Irondale limestone, Mahoning sandstone and limestone, and Kanawha black flint. Exact syn. Barren Measures.

Elk River series, White. Geol. Soc. Am., Bull., vol. iii, p. 189. 1892.
Upper Carboniferous. West Virginia. Exact syn. Barren Measures.

Elk River series, White. West Virginia Geol. Surv., vol. i, p. 201. 1899.
Carboniferous. West Virginia. Exact syn. Barren Measures.

Ellensburg sandstone, Russell. U. S. Geol. Surv., 20th Ann. Rept., pt. ii, pp. 127–128. 1900.
Tertiary. Washington. Included in Miocene.

Ellicottsville conglomerate, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 1531. 1892.
Devonian. Pennsylvania. Included in Venango.

Elliott Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 376. 1893.
Carboniferous. Texas. Included in Strawn division.

Ellis limestone, Iddings and Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 1. 1894.
Juratrias. Montana.

Ellis, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 30. 1896.
Juratrias. Wyoming.

Ellis, Peale. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 24. 1896.
Juratrias. Montana.

Ellis formation, Weed. U. S. Geol. Surv., 18th Ann. Rept., pt. iii, pp. 477–478. 1898.
Juratrias. Montana.

Ellis formation, Weed. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 55, 56. 1899.
Juratrias. Montana.

Ellis formation, Iddings and Weed. U. S. Geol. Surv., Mon., vol. xxxii, pt. ii, pp. 149–164. 1899.
Juratrias. Yellowstone Park.

Elm Creek bed, Drake. Texas. Geol. Surv., 4th Ann. Rept., p. 424. 1893.
Carboniferous. Texas. Included in Albany division.

Elmont limestone, Beede. Kan. Acad. Sci., Trans., vol. xv, p. 30. 1898.
Carboniferous. Kansas.

Empire beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 308. 1898.
Tertiary. Oregon. Included in Miocene. Exact syn. Astoria sandstones.

Empire formation, Diller. U. S. Geol. Surv., 19th Ann. Rept., pt. iii, p. 319. 1899.
Tertiary. Oregon. Included in Miocene.

Empire shale, Walcott. Geol. Soc. Am., Bull., vol. x, pp. 199, 207. 1899.
Algonkian, Pre-Cambrian. Montana. Included in Belt terrane.

Emporia limestone, Kirk. Kan. Univ. Geol. Surv., vol. i, p. 80. 1896.
Carboniferous. Kansas.

Encrinal limestone, Hall. N. Y. Geol. Surv., 3d Ann. Rept., p. 298. 1839.
Devonian. New York.

Encrinal limestone, Hall. Geol. of New York, pt. iv, 4th Geol. Dist., pp. 18, 187. 1843.
Paleozoic. New York. Included in Hamilton group.

Encrinal limestone, Hall. Geol. of New York, pt. iv, 4th Geol. Surv., pp. 18, 145. 1843.
Paleozoic. New York. Included in New York system. Includes Scutella limestone. Part. syn. No. 6, Pennsylvania survey.

Encrinal limestone, Emmons. Agriculture of New York, vol. i, p. 168. 1846.
New York. Included in Helderberg division of New York system.

Encrinal limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 52. 1890.
Silurian. Arkansas. Included in Lower Helderberg.

Encrinal limestone, Grabau. Buffalo Soc. Nat. Hist., Bull., vol. vi, pp. 30–32. 1898.
Devonian. New York.

Encrinital limestone, Shumard. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, pp. 171, 181, 1855.
Carboniferous. Missouri.

Encrinital limestone, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., pp. 97, 175, 194. 1855.
Carboniferous. Missouri. Included in Mountain or Lower Carboniferous limestone.

Encrinital limestone, Meek. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, p. 98. 1855.
Carboniferous. Missouri.

Encrinital limestone, Shumard. Mo. Geol. Surv., Repts., 1855–1871, pp. 294, 305. 1873.
Carboniferous. Missouri. Included in Lower Carboniferous.

Encrinital limestone, Broadhead. Mo. Geol. Surv., Rept., 1855–1871, pp. 43, 71. 1873.
Carboniferous. Missouri. Included in Lower Carboniferous. Exact syn. Burlington limestone.

Encrinital limestone, Meek. Mo. Geol. Surv., Repts., 1855–1871, pp. 140, 173. 1873.
Carboniferous. Missouri. Included in Lower Carboniferous.

Encrinital limestone, Broadhead. Mo. Geol. Surv., Repts., 1873–74, pp. 25, 67, 183. 1874.
Carboniferous. Missouri. Included in Lower Carboniferous, Mountain limestone. Exact syn. Burlington.

Encrinital limestone, Broadhead. Mo. Geol. Surv., Repts., 1873–74, pp. 25, 67. 1874.
Lower Carboniferous. Missouri. Exact syn. Burlington limestone.

English River gritstones, Bain. Am. Geol., vol. xv, p. 322. 1895.
Carboniferous. Iowa. Included in Mississippian series, Kinderhook.

English River gritstones, Bain. Iowa Geol. Surv., vol. v, p. 134. 1896.
Carboniferous. Iowa. Included in Kinderhook.

Eolian limestone, Hitchcock. Geol. of Vermont, vol. i, pp. 396–419. 1861.
Cambrian. Vermont. Exact syns. Granular limestone, Berkshire limestone, Stockbridge limestone, Dorset limestone.

Eolian limestone, Hitchcock. Geol. of Vermont, vol. i, pp. 394–395, 419–424. 1861.
Cambrian. Vermont. Exact syns. Berkshire limestone, Stockbridge limestone.

Eolian limestone, Hitchcock. Geol. of Maine, Prelim. Rept., vol. ii, pp. 245–259. 1862.
Cambrian. Maine. Exact syn. Stockbridge limestone.

Eolian limestone, Crosby. Rept. on Geol. Map of Mass., p. 40. 1876.
Pre-Cambrian.

Eolian limestone, Dana. Am. Jour. Sci., 3d ser., vol. xiii, p. 414. 1877.
Silurian. Vermont. Part. syns. Lower Calciferous, Quebec, Chazy, Black River, Trenton.

Eolian limestone, Hitchcock. Geol. Soc. Am., Bull., vol. i, p. 513. 1889.
Ordovician(?). Vermont.

Eolian, Walcott. Geol. Soc. Am., Bull., vol. ii, p. 502. 1891.
Ordovician(?). Quebec. Included in Quebec group.

Eo-Lignitic, Heilprin. Phil. Acad. Nat. Sci., Proc., 1882, p. 184. 1882.
Included in Eocene.

Eo-Lignitic, Heilprin. Phil. Acad. Nat. Sci., Jour., vol. ix, p. 116. 1884.
Included in Tertiary-Eocene. Exact syns. Marlborough and Piscataway beds of Maryland(?). Shark River deposits of New Jersey.

Equus beds, Cope. U. S. Geol. and Geog. Surv. of Terr., Mon., vol. iii, pp. 19–20. 1881.
Tertiary. Included in Pliocene.

Equus beds, Dumble. Jour. of Geol., vol. ii, pp. 563–564. 1894.
Pleistocene. Texas.

Equus beds, Scott. Geol. Soc. Am., Bull., vol. v, p. 594. 1894.
Pleistocene. Nebraska.

Equus beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 336. 1898.
Pleistocene.

Erian, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Devonian. New York. Includes Marcellus shale, Hamilton beds.

Erie division, Vanuxem. Geol. of New York, pt. iii, pp. 170–171. 1842.
Paleozoic. New York. Included in New York system.

Erie division, Mather. Geol. of New York, pt. i, pp. 317–323. 1843.
Paleozoic. New York. Included in New York system. Includes Ithaca and Chemung group, Hamilton group, Marcellus shales, 3d graywacke, No. viii, Olive shale, Skaneateles shale, Ludlowville shale, Encrinal limestone, Moscow shale, Apulia and Sherburne shales, Cazenovia group.

Erie, Emmons. Agriculture of New York, vol. i, pp. 180–186. 1846.
Devonian. New York. Included in New York system. Includes Marcellus, Hamilton.

Erie clay, Logan. Can. Geol. Surv., Repts., 1843–1863, pp. 887, 896–907. 1863.
Canada. Included in Drift (upper stratified portion).

Erie clays, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 26. 1870.
Carboniferous. Ohio.

Erie shale, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 20. 1870.
Devonian. Ohio.

Erie shale, Newberry. Ohio Geol. Surv. Rept. Prog., 1869, p. 27. 1870.
Devonian. Ohio. Part. syn. Chemung group of New York.

Erie clays, Newberry. Am. Nat., vol. iv, p. 202. 1870.

Erie clays, Newberry. Lyceum of New York, Annals, vol. ix, pp. 222–225. 1870.
Pleistocene. Great Lakes region. Included in Drift deposit.

Erie shale, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 21. 1871.
Devonian. Ohio.

Erie shale, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 163, 190. 1873.
Devonian. Ohio.

Erie shale, Read. Ohio Geol. Surv., vol. i, p. 486. 1873.
Devonian. Ohio.

Erie clay, Gilbert. Ohio Geol. Surv., vol. i, pt. i, p. 544. 1873.
Pleistocene. Ohio.

Erie clay, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 174. 1873.
Pleistocene. Ohio.

Erie muck, Collett. Ind. Geol. Surv., 5th Ann. Rept., for 1873, p. 408. 1874.
Indiana.

Erie shale, Newberry. Ohio Geol. Surv., vol. ii, pp. 188, 213. 1874.
Carboniferous. Ohio.

Erie shale, Winchell. Ohio Geol. Surv., vol. ii, pp. 242, 264. 1874.
Carboniferous. Ohio.

Erie shale, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 76–82. 1875.
Silurian. Pennsylvania and Ohio. Exact. syn. No. vii.

Erie clay, Newberry. Ohio Geol. Surv., vol. iii, p. 32. 1878.
Pleistocene. Ohio.

Erie shale, Read. Ohio Geol. Surv., vol. iii, p. 306. 1878.
Carboniferous. Ohio.

Erie, Newberry. Ohio Geol. Surv., vol. iii, p. 18. 1878.
Carboniferous. Ohio.

Erie shale, Herrick. Denison Univ. Sci. Lab., Bull., vol. iv, p. 106. 1888.
Devonian. Ohio.

Erie shale, Orton. Ohio Geol. Surv., vol. vi, pp. 4, 23. 1888.
Devonian. Ohio. Included in Ohio shale.

Erie shale, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 21. 1893.
Devonian. Ohio. Included in Ohio shale.

Erie limestone, Haworth. Kan. Univ. Quart., vol. ii, pp. 118–119. 1894.
Carboniferous. Kansas.

Erie limestone, Haworth and Piatt. Kan. Univ. Quart., vol. ii, p. 116. 1894.
Carboniferous. Kansas. Exact syn. Altoona limestone.

Erie limestone, Haworth and Kirk. Kan. Univ. Quart., vol. ii, pp. 108–109. 1894.
Carboniferous. Kansas.

Erie limestone, Haworth. Am. Jour. Sci., 3d ser., vol. i, p. 458. 1895.
Carboniferous. Kansas. Included in Coal Measures.

Erie limestone, Kirk. Kan. Univ. Geol. Surv., vol. i, p. 76. 1896.
Carboniferous. Kansas.

Erie limestone, Haworth. Kan. Univ. Geol. Surv., vol. i, pp. 45–47. 1896.
Carboniferous. Kansas.

Erie limestone, Haworth. Kan. Univ. Geol. Surv., vol. i, pp. 154–157, 165. 1896.
Carboniferous. Kansas. Includes Bethany Falls limestone.

Erie limestone, Bennett. Kan. Univ. Geol. Surv., vol. i, pp. 95–97. 1896.
Carboniferous. Kansas.

Erie limestone, Haworth. Kan. Univ. Geol. Surv., vol. iii, pp. 44–47, 88, 94, 101–102. 1898.
Carboniferous. Kansas. Included in Pottawatomie formation. Includes Bethany Falls rock and the Winterset limestone.

Erie limestone, Orton. Geol. Soc. Am., Bull., vol. x, p. 104. 1899.
Upper Carboniferous. Kansas.

Eryops beds, Cope. U. S. Geol. and Geog. Surv. of Terr., Bull., vol. v, p. 51–52. 1879.
Carboniferous. Included in Permian.

Escondido, Dumble. Geol. Soc. Am., Bull., vol. iii, pp. 219, 227. 1892.
Cretaceous. Texas. Included in Upper Cretaceous, Eagle Pass division.

Escondido beds, Vaughan. U. S. Geol. Surv., Bull. No. 164, p. 26. 1900.
Cretaceous. Texas. Included in Eagle Pass formation.

Esmeralda formation, Turner. U. S. Geol. Surv., 21st Ann. Rept., pt. ii, pp. 191–224. 1900. Am. Geol., vol. xxv, pp. 168–170. 1900.
Tertiary. Nevada.

Esopus slate, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 209–210, 244–245, 302. 1894.
Devonian. New York. Exact syn. Cauda-galli grit.

Esopus slate, Darton. Regents, Univ. of N. Y., 47th Ann. Rept., p. 403. 1894.
Devonian. New York. Exact syn. Cauda-galli grit.

Esopus slate, Ries. N. Y. State Geol., 15th Ann. Rept., vol. i, p. 402. 1897.
Silurian. New York.

Esopus grit, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Devonian. New York. Included in Ulsterian.

Esopus grit, Weller. N. J. Geol. Surv., Rept. 1899, p. 44. 1900.
Devonian. New Jersey.

Estuary formation, Engelmann. Eng. Dept., U. S. A., Simpson's Explor. of Great Basin, p. 291. 1876.
Cretaceous or Tertiary. Wyoming and Utah.

Etcheminian series, Matthew. Am. Geol., vol. ii, p. 1. 1888.
Cambrian. Canada.

Etcheminian, Walcott. Geol. Soc. Am., Bull., vol. x, p. 232. 1899.
Algonkian (?). New Brunswick.

Etcheminian series, Matthew. Can. Rec. Sci., vol. iii, p. 72. 1889.
Cambrian. New Brunswick.

Etcheminian, Walcott. Wash. Acad. Sci., Proc., vol. i, p. 338. 1900.
Cambrian. Newfoundland.

Etholen bed, Taff. Texas Geol. Surv., 2d Ann. Rept., pp. 723–725. 1891.
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Silurian. Nevada.

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Carboniferous. Missouri.

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Lower Carboniferous. Illinois.

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Carboniferous. Missouri.

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Carboniferous. Missouri. Included in Lower Carboniferous, Mountain limestone.

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Cretaceous. Texas. Included in Fredericksburg division of Lower Cretaceous.

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Juratrias. Utah.

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Indiana.

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Tertiary. Texas. Included in Miocene.

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Permo-Carboniferous. Kansas.

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Permian. Kansas. Included in Lower division of Big Blue series.

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Ohio.

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Ohio.

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Carboniferous. Kansas.

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Lower Carboniferous. Tennessee.

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Carboniferous. Georgia, Tennessee.

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Lower Carboniferous. Georgia, Alabama.

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Ordivician. Iowa.

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Cambrian. Minnesota.

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Mesozoic. California. Included in Franciscan series.

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Cretaceous(?). California.

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Permian. Missouri.

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Trias. California.

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Pleistocene. Michigan.

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Permian. Missouri.

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Virginia. Exact. syn. Primal.

Formation No. 2, Rogers. Repts. for 1837 and 1838 and Geol. of Virginias, pp. 169, 209. 1884.
Cambro-Silurian. Maryland. Includes Chazy and Calciferous. Exact syns. Valley or Shenandoah limestone, Auroral.

Formation No. 3, Rogers. Repts. for 1837 and 1838 and Geol. of Virginias, pp. 173, 218. 1884.
Silurian. Virginia. Includes Hudson River, Utica, and Trenton. Exact. syn. Matinal of Pennsylvania.

Formation No. 4, Rogers. Rept. for 1837 and Geol. of Virginias, p. 175. 1884.
Silurian. Virginia. Exact syn. Medina, Levant of Pennsylvania.

Formation No. 5, Rogers. Rept. for 1837 and Geol. of Virginias, p. 177. 1884.
Silurian. Virginia. Included in Upper Silurian. Includes Clinton, Niagara, and Salina. Part. syn. Surgent and Scalent of Pennsylvania.

Formation No. 6, Rogers. Rept. for 1837 and Geol. of Virginias, p. 178. 1884. 1837.

Silurian. Virginia. Exact syn. Lower Helderberg pre-Meridian of Pennsylvania.

Formation No. 7, Rogers. Rept. for 1837 and Geol. of Virginias, p. 179. 1884.

Silurian. Virginia. Exact syns. Oriskany, Meridian of Pennsylvania.

Formation No. 8, Rogers. Rept. for 1837 and Geol. of Virginias, p. 179. 1884. 1837.

Devonian. Virginia. Includes Marcellus, Hamilton, Genesee, Portage, and Chemung. Part. syns. Cadent and Vergent of Pennsylvania.

Formation No. 9, Rogers. Rept. for 1837 and Geol. of Virginias, p. 182. 1884.

Devonian. Virginia. Exact syns. Catskill, Ponent of Pennsylvania.

Formation No. 10, Rogers. Repts. for 1837 and 1839 and Geol. of Virginias, pp. 183, 335. 1884.

Carboniferous. Virginia. Included in Lower Carboniferous. Exact syn. Vespertine sandstone of Pennsylvania.

Formation No. 11, Rogers. Repts. for 1837, 1838, and 1839 and Geol. of Virginias, pp. 183, 201, 336. 1884.

Carboniferous. Virginia. Exact syns. Greenbrier shales and limestone, Umbral shales and limestone of Pennsylvania.

Formation No. 12, Rogers. Repts. for 1838, 1839, and 1840 and Geol. of Virginias, pp. 201, 340, 487. 1884.

Carboniferous. Virginia. Exact syn. Great conglomerate. Part. syn. Seral of Pennsylvania.

Formation No. 13, Rogers. Repts. for 1838, 1839, 1840 and Geol. of Virginias, pp. 202, 342, 487, 506. 1884.

Carboniferous. Virginia. Exact syn. Lower Coal group. Part. syn. Seral of Pennsylvania.

Formation i, Rogers. N. J. Geol. Surv., Final Rept., p. 46. 1840.

New Jersey.

Formation ii, Rogers. N. J. Geol. Surv., Final Rept., pp. 47–90. 1840.

New Jersey. Exact syn. Blue limestone.

Formation iii, Rogers. N. J. Geol. Surv., Final Rept., p. 93. 1840.

New Jersey.

Formation iv, Rogers. N. J. Geol. Surv., Final Rept., p. 99. 1840.

New Jersey.

Formation v, Rogers. N. J. Geol. Surv., Final Rept., p. 103. 1840.

New Jersey.

Formation No. 14, Rogers. Rept. for 1840 and Geol. of Virginias, pp. 491, 510. 1884.

Carboniferous. Virginia. Exact syns. Lower shale and sandstone group. Lower Barren group. Part. syn. Seral of Pennsylvania.

Formation No. 15, Rogers. Rept. for 1840 and Geol. of Virginias, pp. 498, 513. 1884.

Carboniferous. Virginia. Exact syn. Upper Coal group. Part. syn. Seral of Pennsylvania.

Formation No. 5, Tyson. Md. State Agric. Chemist, 1st Rept., p. 32. 1860.

Maryland.

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Maryland.

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Cambrian. Maryland. Exact syns. Primal of Pennsylvania; Potsdam sandstone of New York.

Formation No. 10, Tyson. Md. State Agric. Chemist, 1st Rept., p. 35. 1860.

Silurian. Maryland. Exact syns. Auroral series, Pennsylvania; Chazy and Black River of New York.

Formation No. 11, Tyson. Md. State Agric. Chemist, 1st Rept., p. 35. 1860. Maryland.

Formation No. 12, Tyson. Md. State Agric. Chemist, 1st Rept., p. 36. 1860. Silurian. Maryland. Exact syns. Matinal series of Pennsylvania; Hudson River, Utica, and Trenton of New York.

Formation No. 13, Tyson. Md. State Agric. Chemist, 1st Rept., p. 36. 1860. Silurian. Maryland. Exact syns. Levant series of Pennsylvania; Onedia conglomerate and Medina sandstone of New York.

Formation No. 14a, Tyson. Md. State Agric. Chemist, 1st Rept., p. 37. 1860. Silurian. Maryland. Exact syns. Surgent series of Pennsylvania, Clinton group of New York.

Formation No. 14b, Tyson. Md. State Agric. Chemist, 1st Rept., p. 37. 1860. Silurian. Maryland. Exact syns. Scalent series of Pennsylvania; Onondaga shale and Water-lime groups of New York.

Formation No. 15a, Tyson. Md. State Agric. Chemist, 1st Rept., p. 38. 1860. Silurian. Maryland. Exact syns. Pre-Meridian of Pennsylvania, Lower Helderberg limestone of New York.

Formation No. 15b, Tyson. Md. State Agric. Chemist, 1st Rept., p. 38. 1860. Silurian. Maryland. Exact syns. Meridian series of Pennsylvania; Oriskany sandstone of New York.

Formation No. 16a, Tyson. Md. State Agric. Chemist, 1st Rept., p. 38. 1860. Devonian. Maryland. Exact syns. Cadent series of Pennsylvania; Marcellus, Hamilton, and Genesee of New York.

Formation No. 16b, Tyson. Md. State Agric. Chemist, 1st Rept., p. 39. 1860. Devonian. Maryland. Exact syns. Vergent series of Pennsylvania; Portage, Ithaca, and Chemung groups of New York.

Formation No. 17, Tyson. Md. State Agric. Chemist, 1st Rept., p. 39. 1860. Devonian. Maryland. Exact syns. Ponent series of Pennsylvania; Catskill group of New York.

Formation No. 18a, Tyson. Md. State Agric. Chemist, 1st Rept., p. 39. 1860. Devonian. Maryland. Exact syn. Vespertine series of Pennsylvania.

Formation No. 18b, Tyson. Md. State Agric. Chemist, 1st Rept., p. 40. 1860. Carboniferous. Maryland. Exact syn. Umbral series of Pennsylvania.

Formation No. 19, Tyson. Md. State Agric. Chemist, 1st Rept., p. 40. 1860. Carboniferous. Maryland. Exact syn. Seral series of Pennsylvania.

Formation No. 20, Tyson. Md. State Agric. Chemist, 1st Rept., p. 41. 1860. Juratrias. Maryland

Formation Nos. 21 and 22, Tyson. Md. State Agric. Chemist, 1st Rept., p. 41. 1860.

Cretaceous. Maryland.

Formation No. 23, Tyson. Md. State Agric. Chemist, 1st Rept., p. 43. 1860. Tertiary. Maryland.

Formation No. 24, Tyson. Md. State Agric. Chemist, 1st Rept., p. 44. 1860. Pleistocene. Maryland.

Fort Benton group, Meek and Hayden. Phil. Acad. Nat. Sci., Proc., vol. xiii, pp. 419, 421. 1862.

Lower Cretaceous. Nebraska. Exact syn. Cretaceous No. 2.

Fort Benton, Hayden. U. S. Geol. Surv. of Wyoming, Rept., pp. 87, 90. 1871. Cretaceous. Included in Lower Cretaceous. Exact syn. Cretaceous No. 2.

Fort Benton, Hayden. U. S. Geol. Surv. of Terr., 1st–3d Ann. Repts., pp. 49, 53. 1873.

Cretaceous. Exact syn. Cretaceous No. 2.

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Cretaceous.

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Cretaceous. South Dakota.

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Tertiary. Montana. Included in Neocene.

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Cretaceous. Kansas.

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Cretaceous. Kansas. Included in Niobrara.

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Upper Cretaceous. Kansas. Included in Niobrara.

Fort Hays limestone, Logan. Kan. Univ. Geol. Surv., vol. ii, pp. 219–220. 1897.
Upper Cretaceous. Kansas. Included in Niobrara group.

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Exact syn. Fort Knox sandstone, No. 2.

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Lower Carboniferons. Alabama, Tennessee.

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Cretaceous.

Fort Pierre, Hague. U. S. Explor. of 40th Parallel, vol. ii, pp. 42. 1877.
Cretaceous. Colorado. Included in Colorado formation.

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Cretaceous.

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Cretaceous. South Dakota.

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Cretaceous. Colorado and New Mexico.

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Cretaceous. Minnesota.

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Upper Cretaceous. Kansas. Exact syn. Pierre.

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Permian. Kansas.

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Carboniferous. Kansas. Included in Chase formation, Permian. Exact syn. Florence limestone.

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Cretaceous. Canada. Exact syn. Benton.

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Cretaceous. Canada. Included in Colorado group. Includes Fort St. John shales.

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Carboniferous. Kansas.

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Carboniferous. Missouri. Included in Coal Measures.

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Tertiary. Included in Eocene(?).

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Tertiary. Exact syn. Great Lignite.

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Cretaceous.

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Cretaceous.

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Cretaceous.

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Cretaceous(?).

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Tertiary. Colorado. Exact syn. Great Lignite group.

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Cretaceous. Interior region.

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Tertiary. Montana.

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Tertiary. Montana. Included in Eocene. Exact syn. Paskapoo (Canada).

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Tertiary. Western North America. Included in Eocene.

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Cretaceous. Texas. Included in Washita division.

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Cretaceous. Texas. Included in Washita division of Lower Cretaceous.

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Cretaceous. Texas. Included in Washita division of Lower Cretaceous.

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Cretaceous. Texas. Included in Washita division.

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Cretaceous. Texas. Included in Comanche series.

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Cretaceous. Texas. Included in Washita division of Comanche series.

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Cretaceous. Texas. Included in Comanche series.

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Alaska.

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Alaska.

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Silurian. New Jersey. Exact syn. Trenton limestone.

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Carboniferous. Colorado.

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Carboniferous. Colorado.

Fountain formation, Gilbert. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 36. 1897.
Juratrias. Colorado.

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Carboniferous. Colorado.

Fourth Moraine, Todd. U. S. Geol. Surv., Bull., No. 144, p. 48. 1896.
Pleistocene. Dakota.

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Carboniferous. Texas. Included in Strawn division.

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Upper Cretaceous. Nebraska. Exact syn. Cretaceous No. 5.

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Cretaceous. Exact syn. Cretaceous No. 5.

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Cretaceous.

Fox Hill, Hague, U. S. Geol, Explor. of 40th Parallel, vol. ii, p. 28. 1877.
Cretaceous. Colorado.

Fox Hills, Endlich. U. S. Geol. and Geog. Surv. of Terr., 9th Ann. Rept., p. 187. 1877.
Cretaceous. Colorado.

Fox Hill group, King. U. S. Geol. Explor. of 40th Parallel, vol. i, p. 320–330. 1878.
Cretaceous. Colorado, Wyoming and Utah.

Fox Hills, Endlich. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 76, 109, 125. 1878.

Cretaceous. Colorado.

Fox Hills, White. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 19, 22, 31. 1878.
Cretaceous. Utah and Colorado.

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Cretaceous. Colorado.

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Cretaceous.

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Cretaceous. Wyoming.

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Cretaceous. South Dakota.

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Cretaceous. Canada.

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Cretaceous. Northwestern New Mexico. Includes Upper and Lower Fox Hills shales.

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Cretaceous. Canada.

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Cretaceous. Colorado and New Mexico.

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Cretaceous. Colorado. Included in Montana group.

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Cretaceous. Colorado.

Fragmental, Bain. Am. Jour. Sci., 4th ser., vol. v, pp. 438, 439. 1898.
Carboniferous. Missouri. Included in Missourian series, Bethany limestone.

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Cretaceous(?). California.

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Mesozoic. California. Includes San Francisco sandstone, Foraminiferal limestones and Radiolarian cherts.

Franciscan formation, Turner. Jour. of Geol., vol. vi, pp. 488–493. 1898.
Cretaceous. California. Exact syn. Golden Gate series.

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Cretaceous or Jurassic. California.

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Eozoic. New Hampshire. Included in Montalban group.

Frankenfield, Hill. Harvard Coll. Mus. Comp. Zool., Bull., vol. xxxiv, p. 42. 1899.
Cretaceous. Jamaica. Included in Blue Mountains series.

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Pennsylvania.

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New York.

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Paleozoic. New York. Included in Hudson River group.

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Silurian. New York. Includes Utica and Hudson River.

Franklin white limestone, Wolff and Brooks. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, pp. 431–456. 1898.
Pre-Cambrian. New Jersey.

Fredericksburg, Roger Bros. Phil. Acad. Nat. Sci., Proc., vol. i, p. 142. 1843. Virginia. Exact syn. Oolite of Europe.

Fredericksburg, White. Phil. Acad. Nat. Sci., Proc., 1887, p. 40. 1887. Cretaceous. Texas. Included in Comanche series.

Fredericksburg division, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 111–113. 1888. Cretaceous. Arkansas. Included in Lower Cretaceous or Comanche series.

Fredericksburg division, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, p. li, 1890.
Cretaceous. Texas. Included in Comanche series.

Fredericksburg division, Hill. Texas Geol. Surv., 1st Ann. Rept., pp. 120–126. 1890. Cretaceous. Texas. Included in Comanche series. Includes Caprina chalk and limestone, Comanche Peak beds.

Fredericksburg division, Taff. Texas Geol. Surv., 2d Ann. Rept., p. 717. 1891. Cretaceous. Texas. Included in Lower Cretaceous. Includes Texana bed, Caprotina limestone.

Fredericksburg division, Hill. Geol. Soc. Am., Bull., vol. ii, pp. 503, 504, 509. 1891. Cretaceous. Texas. Includes Goodland limestone, Caprina limestone, Comanche Peak chalk, Gryphæa and Walnut clays, and Paluxy sands.

Fredericksburg division, Taff. Texas Geol. Surv., 3d Ann. Rept., pp. 273–275. 1892. Cretaceous. Texas. Includes Kiamitia clay, Austin marble, Flag limestone, Caprina limestone, Comanche Peak, and Texana.

Fredericksburg division, Taff. Texas Geol. Surv., 4th Ann. Rept., pp. 245–261. 1893. Cretaceous. Texas. Included in Lower Cretaceous. Includes Kiamitia clay, Caprina, Comanche Peak, and Texana limestone.

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Cambrian. Missouri. Included in Upper Cambrian.

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Freeport group, Lesley. 2d Pa. Geol. Surv., Rept. Q, p. xvi. 1878. Carboniferous. Pennsylvania.

Freeport, Platt. 2d Pa. Geol. Surv., Rept. H^5, p. 315. 1880. Carboniferous. Pennsylvania.

Freeport group, Chance. 2d Pa. Geol. Surv., Rept. V^2, pp. 33–41. 1880. Carboniferous. Pennsylvania. Included in Lower Productive Measures.

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Freeport, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 53–54. 1885. Carboniferous. Pennsylvania.

Freeport, Ashburner. 2d Pa. Geol. Surv., Rept. R^2, p. 384. 1885. Carboniferous. Pennsylvania.

Freeport coal, White. U. S. Geol. Surv., Bull., No. 65, p. 147. 1891. Carboniferous. Ohio, Pennsylvania, West Virginia. Included in Lower Coal Measures, Allegheny River series. Includes Upper, Middle, and Lower **Freeport.**

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Carboniferous. Ohio, Pennsylvania, and West Virginia. Included in Lower Coal Measures, Allegheny River series. Exact syns. Shawnee, White, Buchtel, Summit ore.

Freeport limestone, Lower, White. U. S. Geol. Surv., Bull., No. 65, p. 163. 1891.
Carboniferous. Ohio, Pennsylvania. Included in Lower Coal Measures, Allegheny River series. Exact syn. Buff limestone of Ohio.

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Carboniferous. Pennsylvania, and West Virginia. Included in Lower Coal Measures, Allegheny River series.

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Upper Carboniferous. West Virginia. Included in Lower Coal Measures.

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Carboniferous. Ohio.

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Carboniferous. Ohio.

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Pleistocene. Wisconsin.

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Pleistocene. Illinois.

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Carboniferous. Pennsylvania. Included in Allegheny series.

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Ordovician. Colorado.

Fremont limestone, Cross. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 7. 1894.
Silurian. Colorado.

Frickham bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 403. 1893.
Carboniferous. Texas. Included in Cisco division.

Frio clays, Dumble. Jour. of Geol., vol. ii, pp. 554–555. 1894.
Tertiary. Texas. Included in Eocene.

Frio clays, Kennedy. Phil. Acad. Nat. Sci., Proc., 1895, p. 93. 1895.
Texas. Included in Eocene, Lower Claiborne.

Frog Mountain sandstone, Hayes. Geol. Soc. Am., Bull., vol. v, p. 470. 1894.
Lower Devonian. Georgia and Alabama. Included in Oriskany (?).

Frostburg coal formation, Tyson. Md. Acad. of Sci. and Lit., article iv, pp. 92–98. 1837.
Carboniferous. Maryland.

Frostburg formation, Clark. Md. Geol. Surv., vol. i, pp. 156, 188. 1897.
Carboniferous. Maryland. Included in Permian.

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Permian. Maryland.

Fullington shale, Cragin. Am. Geol., vol. xvi, p. 379. 1895.
Cretaceous. Kansas. Included in Belvidere beds. Includes Black Hill shale, Blue Cut shale.

Fusulina limestone, Worthen. Ill. Geol. Surv., vol. vii, p. 27. 1883.
Carboniferous. Illinois. Included in Coal Measures.

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Pleistocene. Washington.

Galena limestone, Whitney. Iowa Geol. Surv., vol. i, pt. i, pp. 288–290, 298–302, 350–356. 1858.
Silurian. Iowa.
Galena limestone, Hall. Iowa Geol. Surv., vol. i, pp. 60–63. 1858.
Silurian. Iowa. Exact syn. Upper Magnesian limestone.
Galena limestone, Hall and Whitney. Am. Jour. Sci., 2d ser., vol. xxvii, p. 108. 1859.
Silurian. Iowa.
Galena limestone, Whitney. Rept. on Upper Mississippi lead region, p. 168. 1862.
Silurian. Wisconsin. Exact syn. Upper Magnesian or Cliff limestone.
Galena limestone, Worthen. Ill. Geol. Surv., vol. i, pp. 141–149. 1866.
Silurian. Illinois. Included in Trenton group.
Galena limestone, Whitney. Ill. Geol. Surv., vol. i, pp. 169–172. 1866.
Silurian. Illinois.
Galena limestone, White. Iowa Geol. Surv., vol. i, pp. 177–180. 1870.
Silurian. Iowa. Included in Trenton group.
Galena limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., pp. 49–53. 1870.
Lower Silurian, Minnesota.
Galena limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 1st Ann. Rept., pp. 104–108. 1873.
Lower Silurian. Minnesota.
Galena limestone, Shaw. Ill. Geol. Surv., vol. v, pp. 17–21, 36–38, 66–69, 76–77, 86–88, 99–100, 111–113, 129–131, 154–155. 1873.
Silurian. Illinois. Included in Trenton.
Galena group, Broadhead. Mo. Geol. Surv., Rept. 1873–74, p. 28. 1874.
Lower Silurian. Missouri.
Galena limestone, Harrington. Minn. Geol. and Nat. Hist. surv., 4th Ann. Rept., p. 91. 1876.
Lower Silurian. Minnesota.
Galena limestone, Chamberlin. Geol. of Wis., vol. ii, p. 305–314. 1877.
Lower Silurian. Wisconsin.
Galena limestone, Irving. Geol. of Wis., vol. ii, p. 562. 1877.
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Galena, Chamberlin. Geol. of Wis., vol. i, pp. 105, 165–170. 1883.
Silurian. Wisconsin. Included in Trenton period.
Galena limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 293. 1884.
Galena limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 50. 1890.
Silurian. Arkansas.
Galena limestone, McGee. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 327. 1891.
Silurian. Iowa.
Galena, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, p. 368. 1892.
Lower Silurian. Minnesota. Included in Trenton.
Galena limestone, Keyes. Iowa Geol. Surv., vol. i, pp. 26–28. 1893.
Silurian. Iowa.
Galena, Winchell. Am. Geol., vol. xv, p. 33. 1895.
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Silurian. Illinois.

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Silurian. Massachusetts, Connecticut.

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Silurian. Ohio.

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Silurian. New York, Mississippi Valley. Includes Upper Pentamerus and shaly limestone, Lower Pentamerus and Tentaculite limestone.

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Silurian. Tennessee. Included in Lower Helderberg period.

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Silurian. Ohio. Exact syn. Water lime.

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Silurian. Ohio. Exact syn. Water lime.

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Devonion. Ohio.

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Devonian. Pennsylvania.

Helderberg group, Upper, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, p. 291. 1881.

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Silurian. Illinois. Exact. syn. Niagara of Northern Illinois.

Helderberg, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. T^2, pp. 87–89. 1882.
Silurian. Pennsylvania.

Helderberg, Lower, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 127–147. 1882.
Silurian. Pennsylvania. Includes Stormville shales, Decker Ferry limestone, Bossardville limestone, and Poxono Island shales. Exact syn. No. vi.

Helderberg, Upper, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 116–122. 1882.
Devonian. Pennsylvania. Included in No. viii. Includes Corniferous limestone, and Cauda-galli grit.

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Silurian. Wisconsin. Included in Upper Silurian. Includes Oriskany, Lower Helderberg, and Salina.

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Silurian. Wisconsin. Included in Upper Silurian.

Helderberg, Lower, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxxi, p. 48. 1883.
Silurian. New York.

Helderberg, Lower, White. 2d Pa. Geol. Surv., Rept. G^7, pp. 87–110. 1883.
Silurian. Pennsylvania. Includes Stormville, Bastard, and Bossardville limestones, Salina series. Exact syn. No. vi.

Helderberg, Lower, Chamberlin. Geol. of Wis., vol. i, pp. 197–200. 1883.
Upper Silurian. Wisconsin.

Helderberg, Lower, Claypole. 2d Pa. Geol. Surv., Rept. F^2, pp. 58–62. 1885.
Silurian. Pennsylvania. Includes Lewistown (Bossardville) limestone.

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Silurian. New York.

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Silurian. New York.

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Devonian. New York.

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Devonian. New York.

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Silurian. Ohio, Indiana. Includes Water lime, and Cliff limestone.

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Devonian. Ohio, Indiana. Exact syn. Corniferous.

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Silurian. Ohio. Exact syn. Water-lime formation.

Helderberg, Lower, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 52. 1890.
Silurian. Arkansas. Includes Pentamerus, Catskill, Encrinal, and Upper Pentamerus limestones. Part syn. Water-lime group.

Helderberg limestone, Upper, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 24–26. 1890.
Devonian. Ohio. Includes Columbus and Delaware limestones.

Helderberg, Lower, Phinney. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 633. 1891.
Silurian. Indiana.

Helderberg, Lower, D'Invilliers. 2d Pa. Geol. Surv., Rept. F^4, pp. 54–61. 1891.
Silurian. Pennsylvania. Includes Lewistown limestone. Exact syn. No. vi.

Helderberg, Upper, Phinney. U. S. Geol. Surv., 11th Ann. Rept., pt.i, p. 635. 1891.
Devonian. Indiana.

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Silurian. New York.

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Devonian. Maryland. Part. syn. No. vi.

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Silurian. New York.

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Devonian. New York. Includes Upper shaly beds, Scutella, Pentamerus, and Tentaculite beds.

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Devonian. New York, Pennsylvania. Included in Corniferous (Lower Devonian.)

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Devonian. New York. Includes Onondaga, Corniferous, Seneca.

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Devonian. New York. Includes Onondaga and Corniferous limestones.

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Silurian. New York.

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Silurian. New York.

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Silurian. New York.

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Devonian. Maryland. Part. syns. Lewistown.

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Silurian. Indian Territory.

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Devonian. New York. Includes Coeymans limestone, New Scotland beds, Becraft limestone, Kingston beds.

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Devonian. Maryland.

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Algonkian, Pre-Cambrian. Montana. Included in Belt terrane.

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Cambrian. Pennsylvania.

Hemlock formation, Clements. U. S. Geol. Surv., Mon., vol. xxxvi, pp. 73–154. 1899.
Michigan. Included in Lower Huronian series.

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Algonkian. Michigan. Includes Bone Lake schists.

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Michigan.

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Algonkian. Michigan. Included in Lower Huronian.

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Carboniferous. Kansas.

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Upper Carboniferous. Missouri. Included in Des Moines series.

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Upper Carboniferous. Missouri. Exact syn. Appanoose. Part. syns. Pawnee and Oswego of Kansas.

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Carboniferous. Mississippi Valley. Included in Coal Measures.

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Cretaceous. Utah.

Henrys Fork group, Peale. U. S. Geol. and Geog. Surv. of Terr., 9th Ann. Rept., p. 89. 1877.
Cretaceous. Colorado. Included in Dakota.

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Cretaceous. Utah.

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Cambrian and Silurian. Michigan.

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Carboniferous. Colorado.

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Cambrian. Tennessee and North Carolina.

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Eocene. Kentucky.

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Tertiary. Kentucky. Included in Eocene.

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Cambrian. Texas. Included in Lower Cambrian(?).

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Cambrian. Texas.

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Cambrian. Texas.

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Cambrian. Texas. Included in Lower Cambrian.

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Included in Eocene. Colorado.

High Rock sandstone, Ashley. Indiana Dept. Geol. and Nat. Resources, 23d Ann. Rept., 1898, p. 113. 1899.
Carboniferous. Indiana.

Highbridge limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 46. 1898.
Silurian. Kentucky.

Highland moraine, Elftman. Am. Geol., vol. xxi, pp. 92-93. 1898.
Pleistocene. Minnesota.

Highland Archean, Britton. Sch. of Mines Quart., vol. ix, pp. 33-37. 1887.
New Jersey. Includes Gneissic and Schistose group, Iron-bearing group, and Massive group. Part. syn. Laurentian.

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Silurian. Ohio. Included in Niagara series.

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Ohio. Included in Niagara series.

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Upper Silurian. Ohio. Included in Niagara group.

Hillsboro sandstone, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., p. 20. 1890.
Silurian. Ohio. Included in Niagara group.

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Upper Silurian. Ohio. Included in Niagara group.

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Jurassic. California. Included in Corallian-Jurassic.

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Jurassic. California. Included in Corallian.

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Minnesota.

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Cambrian. Iowa. Included in St. Croix sandstone.

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Cambrian. Minnesota.

Hindostan whetstone, Kindle. Indiana Dept. Geol. and Nat. Resources, 20th Ann. Rept., 1895, p. 336. 1896.
Indiana.

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Algonkian. Massachusetts. Part. syn. Stamford gneiss.

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Algonkian. Massachusetts.

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Pre-Cambrian. Massachusetts.

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Silurian. Texas. Included in San Saba series.

Hinton division, Comstock. Texas Geol. Surv., 1st Ann. Rept., pp. 302-303. 1890.
Silurian. Texas. Included in San Saba series.

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Carboniferous. West Virginia. Exact syns. Greenbrier shale, No. xi of Rogers.

Hinton, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 26. 1896.
Carboniferous. Virginia, West Virginia.

Hinton formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Carboniferous. Virginia and West Virginia. Part syns. No. xi, Greenbrier shale.

Hog Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 397. 1893.
Carboniferous. Texas. Included in Canyon division.

Hogback sandstone, Middle, Powell. U. S. Geog. and Geol. Surv., Geol. of Uinta Mountains., pp. 40, 48, 155. 1876.
Cretaceous. Utah. Included in Point of Rocks.

Hogback sandstone, Upper, Powell. U. S. Geog. and Geol. Surv., Geol. of Uinta Mountains, pp. 40, 48, 155. 1876.
Cretaceous. Utah. Included in Point of Rocks.

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Cretaceous. Alaska.

Holland sandstone, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., p. 24. 1890.
Silurian. Ohio. Exact syns. Monclova sandstone, Sylvania sandstone.

Holocene, Perry. Boston Soc. Nat. Hist., Proc., vol. xv, 1872-73, p. 55. 1872.
New England. Included in Tertiary.

Holyoke formation, Wadsworth. Mich. Geol. Surv., Rept. State Board for 1891, 1892, pp. 63, 64, 66, 84, 127. 1893.
Azoic or Archean. Michigan. Exact syn. Upper Marquette series. Part. syn. Taconic formation in Michigan.

Holyoke, Van Hise. Geol. Soc. Am., Bull., vol. v, p. 6. 1893.
Archean. Michigan. Included in Marquette.

Home Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept. pp. 398-399. 1893.
Carboniferous. Texas. Included in Canyon division.

Homewood sandstone, Platt. 2d Pa. Geol. Surv., Rept. H^5, p. 324. 1880.
Carboniferous. Pennsylvania. Included in Pottsville conglomerate.

Homewood sandstone, White. U. S. Geol. Surv., Bull. No. 65, p. 199. 1891.
Carboniferous. Ohio, Pennsylvania, West Virginia. Included in Pottsville conglomerate series.

Homewood sandstone, Orton. Ohio Geol. Surv., vol. vii, p. 36. 1893.
Carboniferous. Ohio. Included in conglomerate group.

Honaker limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Cambrian. Virginia and West Virginia.

Honaker limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
Cambrian. Virginia and Tennessee.

Honesdale sandstone, White. 2d Pa. Geol. Surv., Rept. G^5, pp. 66–68. 1881.
Devonian. Pennsylvania. Included in Catskill.

Honesdale sandstone, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 97–98. 1882.
Devonian. Pennsylvania. Included in Catskill.

Honesdale sandstone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 1580. 1892.
Devonian. Pennsylvania. Included in Catskill, No. ix.

Honesdale sandstone, Prosser. U. S. Geol. Surv., Bull. No. 120, p. 78. 1894.
Devonian. New York, Pennsylvania. Included in Catskill (Upper Devonian).

Hoosac schist, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Hawley sheet. 1892.
Silurian or Cambrian. Massachusetts. Part. syn. Stockbridge limestone, upper part.

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Siluro-Cambrian. Massachusetts.

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Cambrian (?). Massachusetts. Part. syn. Stockbridge limestone.

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Silurian. Massachusetts.

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Silurian. Massachusetts. Included in Lower Silurian.

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Silurian. Massachusetts.

Hoover division, Comstock. Texas Geol. Surv., 1st Ann. Rept., pp. 298–301. 1890.
Silurian. Texas.

Hop Brook limestone, Emerson. U. S. Geol. Surv., Bull. No. 159, p. 52. 1899.
Pre-Cambrian. Massachusetts.

Hopewell sandstone, Ami. Can. Rec. Sci., vol. viii, p. 162. 1900.
Carboniferous. Canada.

Hordes Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 422. 1893.
Carboniferous. Texas. Included in Albany division.

Horse Creek clay and shales, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 379. 1893.
Carboniferous. Texas. Included in Strawn division.

Horse Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 419. 1893.
Carboniferous. Texas. Included in Cisco division.

Horsepen group, White. Geol. Soc. Am., Bull., vol. vi, p. 316. 1895.
Upper Carboniferous. West Virginia. Included in Pottsville formation.

Horsetown, Becker. U. S. Geol. Surv., Bull. No. 19, p. 20. 1885.
California.

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Cretaceous.

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Devonian. Pennsylvania. Included in Venango.

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Trias. California. Included in Lower Karnic.

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Trias. California. Included in Cedar formation.

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Pleistocene. Yellowstone Park.

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Carboniferous. Kansas. Exact syn. Topeka limestone.

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Silurian. New York.

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Silurian. New York. Includes Frankfort slate and Mohawk slate.

Hudson River group, Vanuxem. Geol. of N. Y., pt. iii, pp. 60–67. 1842.
Paleozoic. New York. Included in New York system. Includes Frankfort slate, Green slate, Pulaski shale, Graywacke of Eaton, and No. iii, Pa. Survey.

Hudson River group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 30. 1843.
Paleozoic. New York. Included in New York system. Exact syn. Blue limestone of Ohio.

Hudson River group, Mather. Geol. of N. Y., pt. i, pp. 369–389. 1843.
Paleozoic. New York. Included in Champlain division. Includes Frankfort slate, Graywacke, Pulaski shale, and No. iii, Pa. Survey.

Hudson River group, Hall. Foster and Whitney's Rept. on Lake Superior Dist., pt. ii, p. 148. 1851.
Silurian. Lake Superior region.

Hudson River, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., p. 110. 1855.
Silurian. Missouri. Included in Lower Silurian.

Hudson River group, Hall. Iowa Geol. Surv., vol. i, p. 64. 1858.
Silurian. Iowa.

Hudson River group, Whitney. Iowa Geol. Surv., vol. i, pp. 290, 299, 356. 1858.
Silurian. Iowa.

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Silurian. Iowa.

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Silurian. Iowa.

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Paleozoic. Vermont. Included in Hudson period.

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Silurian. Wisconsin.

Hudson River formation, Logan. Can. Geol. Surv., Rept. 1843–1863, pp. 198–224. 1863.
Lower Silurian. Canada.

Hudson River formation, Chapman. Can. Inst., new ser., vol. viii, pp. 205–208. 1863.
Silurian. Canada. Included in Lower Silurian, Ontario group.

Hudson River formation, Bell. Can. Geol. Surv., Rept. 1863–1866, pp. 171–173, 1866. Can. Geol. Surv., Rept. 1866–1869, pp. 125–127, 1871.
Silurian. Canada.

Hudson River group, Meek. Am. Jour. Sci., 2d ser., vol. xviii, p. 256. 1867.
Silurian. Illinois, New York.

Hudson River slate, Cook. Geol. of N. J., pp. 135–145. 1868.
Silurian. New Jersey.

Hudson River group, Shumard. Mo. Geol. Surv., Repts. 1855–1871, pp. 264, 297. 1873.
Silurian. Missouri. Includes Upper Hudson shale, Cape Girardeau sandstone, Lower Hudson shale, and Receptaculite limestone.

Hudson shale, Upper, Shumard. Mo. Geol. Surv., Repts. 1855–1871, p. 264. 1873.
Silurian. Missouri. Included in Hudson River group.

Hudson shale, Lower, Shumard. Mo. Geol. Surv., Repts. 1855–1871, p. 265. 1873.
Silurian. Missouri. Included in Hudson River group.

Hudson group, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 60. 1873.
Silurian. Ohio.

Hudson, Hotchkiss. A Geographical and Political Summary of Virginia, p. 22. 1876.
Cambrian and Lower Silurian. Virginia. Exact syns. Matinal. (Formation iii, Rogers.)

Hudson River, Prime. Am. Phil. Soc., Proc., vol. xvi, p. 254. 1877.
Silurian. Pennsylvania. Exact. syns. Matinal, No. iii in part.

Hudson River, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 532, 558. 1877.
Silurian. Appalachian region. Part. syn. Matinal in part.

Hudson River slates, Prime. Am. Jour. Sci., 3d ser., vol. xv, p. 269. 1878.
Silurian. Pennsylvania. Exact syn. Matinal slates.

Hudson River, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxvi, pp. 259–265. 1878.
Silurian. New York, Pennsylvania, and Ohio valley. Exact syn. Cincinnati.

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Silurian. Pennsylvania. Included in No. iii.

Hudson River, Dana. Am. Jour. Sci., 3d ser., vol. xvii, p. 375. 1879.
Silurian. New York.

Hudson River group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, pp. 267, 269, 285. 1881.
Ordovician.

Hudson River, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 48–51. 1881.
Silurian. Pennsylvania.

Hudson Tribolite beds, Wooster. Geol. of Wisconsin, vol. iv, p. 110. 1882.
Cambrian. Wisconsin. Included in Potsdam sandstone.

Hudson, Stevenson. 2d Pa. Geol. Surv., Rept. T², pp. 92–93. 1882.
Silurian. Pennsylvania.

Hudson River group, Linney. Ky. Geol. Surv., Geol. of Garrard Co., pp. 15–19. 1883.
Silurian. Kentucky. Includes Lower, Middle, and Upper.

Hudson River formation, Chamberlin. Geol. of Wis., vol. i, pp. 170–175. 1883.
Lower Silurian or Cambro-Silurian. Wisconsin. Exact syn. Cincinnati.

Hudson River, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxxi, p. 41. 1883.
Silurian.

Hudson River, Winchell. Minn. Geol. and Nat. Hist., Surv., Final Rept., vol. i, p. 360. 1884.

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Silurian or Cambrian. Kentucky. Included in Hudson River period.

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Archean. New Brunswick.

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Silurian. New Brunswick. Included in Upper Silurian.

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Carboniferous. Pennsylvania.

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Carboniferous. Tennessee.

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Silurian. Pennsylvania. Includes Oneida and Medina.

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Lower Silurian. Canada (eastern). Included in Quebec group. Exact syn. Calciferous.

Levis division, Richardson. Can. Geol. Surv., Rept. 1863–66, pp. 31–32. 1866.
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Silurian. Pennsylvania. Included in Lower Helderberg.

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Silurian. Virginia. Part syn. Lower Helderberg.

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Silurian. West Virginia and Maryland.

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Silurian. Maryland. Part syns. Niagara, Lower Helderberg.

Lewistown formation, Clark. Md. Geol. Surv., vol. i, p. 182. 1897.
Silurian. Maryland. Includes Niagara, Salina, and Lower Helderberg.

Lewistown, Clark. Md. Geol. Surv., vol. ii, p. 170. 1898.
Silurian and Devonian. Maryland.

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Silurian. Virginia and West Virginia.

Lexington limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 46. 1898.
Silurian. Kentucky.

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Silurian. Massachusetts.

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Silurian. Massachusetts.

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Silurian. Massachusetts.

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Carboniferous. Ohio. Included in Waverly group.

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Tertiary (?). Tennessee.

Lignitic group, Northern. Hilgard. Rept. on Geol. and Agric. of Miss., pp. 110–123. 1860.
Eocene. Mississippi.

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Tertiary (?). Alabama and Mississippi. Exact syn. Great Lignite group.

Lignite deposits, Hayden. Am. Jour. Sci., 2d ser., vol. xlv, pp. 198–208. 1868.
Tertiary. Wyoming and Colorado.

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Eocene. Mississippi, Alabama, Georgia, Texas, Arkansas. Exact syns. Buhrstone group, Siliceous Claiborne. Part syns. Lagrange and Porter's Creek groups, Flatwoods clay.

Lignite, Lesquereux. U. S. Geol. Surv. of Terr., 6th Ann. Rept., p. 315. 1873.
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Eocene (?). Rocky Mountain region.

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Tertiary. British Columbia.

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Cretaceous (?). Western United States.

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Western Territories.

Lignitic, Hayden. U. S. Geol. and Geog. Expl. of Terr., 1873, pp. 26–27. 1874.
Tertiary, Cretaceous. Colorado.

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Silurian. Missouri. Included in Lower Silurian.

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Silurian. Missouri. Included in Lower Silurian.

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Silurian. Missouri. Included in Lower Silurian.

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Silurian. Missouri. Included in Lower Silurian.

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Silurian. Missouri. Included in Lower Silurian.

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Silurian. Missouri. Included in Lower Silurian.

Magnesian limestone, Fourth, Meek. Mo. Geol. Surv., Rept., 1855–1871, pp. 127, 148. 1873.
Silurian. Missouri. Included in Lower Silurian.

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Silurian. Missouri. Included in Lower Silurian and Calciferous sand rock.

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Silurian. Missouri. Included in Lower Silurian and Calciferous sand rock.

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Silurian. Missouri. Included in Lower Silurian and Calciferous sand rock.

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Silurian. Missouri. Included in Lower Silurian and Calciferous sand rock.

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Missouri, Arkansas.

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Cretaceous. Maryland.

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Tertiary. Alabama. Included in Lower Eocene.

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Carboniferous. Pennsylvania.

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Carboniferous. Pennsylvania. Exact syn. Umbral.

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Carboniferous. Pennsylvania. Exact syn. No. xi.

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Carboniferous. Pennsylvania.

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Carboniferous. Pennsylvania. Exact syn. No. xi.

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Lower Carboniferous. West Virginia.

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Carboniferous. Pennsylvania. Included in Lower Carboniferous.

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Carboniferous. Maryland. Exact syn. Canaan formation.

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Carboniferous. Maryland.

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Carboniferous. Ohio. Included in Lower Carboniferous limestone.

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Carboniferous. Ohio.

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Ohio.

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Carboniferous. Ohio. Exact syns. Newtonville limestone, Subcarboniferous limestone, etc.

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Carboniferous. Ohio.

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Carboniferous. Michigan.

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Upper Silurian. Wisconsin. Included in Niagara.

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Silurian. Wisconsin. Included in Niagara.

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Pleistocene. Kansas.

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Carboniferous. Pennsylvania. Includes Meadville limestone and shale, Sharpsville sandstone, and Orangeville shale.

Meadville group, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1757. 1895.
Carboniferous. Pennsylvania. Included in No. x, Pocono.

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Cambrian. Montana.

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Cretaceous. Kansas. Includes Reeder sandstone, Kirby clays, Greenleaf sandstone, and Spring Creek clays.

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Permian. Kansas. Included in Cave Creek formation.

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Includes Schoharie grit, Onondaga and Corniferous limestone.

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Paleozoic. New York. Included in New York system. Includes Red sandstone of Oswego, Niagara sandstone, Saliferous rock of Eaton, and No. 5, Pennsylvania Survey.

Medina, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 34–57. 1843.
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New York. Included in Ontario division of New York system.

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Silurian. New York.

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Silurian. Canada. Included in Middle Silurian. Niagara group.

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Silurian. Canada.

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Silurian. New Jersey.

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Silurian. Ohio.

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Silurian. Appalachian region. Part. syn. Levant in part.

Medina, Newberry. Ohio Geol. Surv., vol. iii, p. 4. 1878.
Silurian. Ohio. Included in Upper Silurian.

Medina, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 44–48. 1881.
Silurian. Pennsylvania. Included in No. iv.

Medina group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. iv, pp. 268, 288. 1881.
Silurian. Includes Medina sandstone, Oneida conglomerate, and Gray sandstone.

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Silurian. Kentucky. Included in Niagara period.

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Silurian. Pennsylvania.

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Silurian. Virginia.

Medina, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 143–147. 1885.
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Silurian. Kentucky.

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Medina, Prosser. Geol. Soc. Am., Bull., vol. iv, pp. 100–108, 116. 1893.
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Silurian. Maryland. Part. syn. No. iv.

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Silurian. Georgia. Included in Red Mountain.

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Silurian. New York.

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Silurian. New York.

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Juratrias. Idaho and Wyoming. Included in Triassic(?). Exact syn. Koipato group.

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Tertiary. Included in Pliocene.

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Pleistocene. Kansas. Part. syn. Equus beds.

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Algonkian. Vermont.

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Silurian, Wisconsin. Included in Canadian. Part. syn. St. Lawrence limestone.

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Lower Silurian. Wisconsin.

Mendota, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 245, 332. 1891.
Cambrian. Wisconsin. Included in Potsdam.

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Algonkian. Michigan.

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Algonkian. Michigan. Includes Vulcan iron formation, Antoine dolomite, and Sturgeon quartzite.

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Algonkian. Michigan. Includes Vulcan formation.

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Cretaceous. Kansas. Included in Comanche series.

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Lower Cretaceous. Kansas. Included in Comanche series.

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Lower Cretaceous. Kansas.

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Cretaceous. Kansas. Included in Dakota.

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Tertiary. California. Included in Pliocene.

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Tertiary. California. Included in Pliocene.

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Tertiary. California. Included in Pliocene.

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Tertiary. California. Included in Pliocene. Exact syn. Wild Cat series.

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Mercer group, Chance. 2d Pa. Geol. Surv., Rept. V, p. 185, et seq. 1879.
Carboniferous. Pennsylvania.

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Carboniferous. Pennsylvania.

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Carboniferous. Ohio. Exact syns. Zoar limestone and Blue limestone.

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Carboniferous. Ohio. Exact syn. Gore limestone.

Mercer group, White. U. S. Geol. Surv., Bull. No. 65, p. 200. 1891.
Carboniferous. Ohio, Pennsylvania, and West Virginia. Included in Pottsville Conglomerate series. Includes Upper and Lower Mercer. Part. syns. Zoar limestone and Blue limestone.

Mercer group, Lower, Orton. Ohio Geol. Surv., vol. vii, pp. 36, 59, 61. 1893.
Carboniferous. Ohio. Included in Conglomerate group.

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Carboniferous. Ohio. Included in Conglomerate group.

Mercer group, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1902. 1895.
Carboniferous. Pennsylvania. Included in No. xii, Pottsville Conglomerate.

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Silurian. Pennsylvania. Includes Oriskany.

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Carboniferous. Canada. Included in Neo-Carboniferous.

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Carboniferous. Indiana.

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Algonkian or Cambrian. New Hampshire. Included in Montalban.

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Arizona.

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Cretaceous. Colorado.

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Pleistocene. Minnesota.

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Archean. Michigan. Included in Marquette series.

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Algonkian. Michigan. Included in Upper Marquette series.

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Algonkian. Michigan. Included in Upper Marquette series.

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Carboniferous. Michigan.

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Carboniferous. Pennsylvania. Included in No. x, Pocono. Exact syn. No. xb.

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Cretaceous. Colorado.

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Post Laramie. Colorado. Part. syn. Denver beds.

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Tertiary. Tennessee, Alabama, Mississippi. Included in Eocene.

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Tertiary. Alabama. Included in Lower Eocene.

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Devonian. Pennsylvania. Included in Catskill.

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Carboniferous. Pennsylvania. Included in Catskill.

New Milford sandstone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1581–1582. 1892.
Devonian. Pennsylvania. Included in Catskill, No. ix.

New Milford shale, Prosser. U. S. Geol. Surv., Bull. No. 120, p. 78. 1894.
Devonian. New York and Pennsylvania. Included in Chemung (Upper Devonian).

New Providence shale, Borden. Indiana Geol. Surv. for 1873, 5th Ann. Rept. for 1873, p. 161. 1874.
Indiana.

New Providence shale, Kindle. Am. Pal., Bull., No. 12, pp. 6–7. 1899.
Devonian. Indiana. Included in Knobstones.

New Red sandstone, Hitchcock. Geol. of Mass., Final Rept., vol. ii, pp. 434–531. 1841.
Mesozoic. Massachusetts.

New Red sandstone, Lea. Phil. Acad. Nat. Sci. Jour., 2d ser., vol. ii, p. 185. 1852.
Pennsylvania.

New Red sandstone, Wheatley. Am. Jour. Sci., 2d ser., vol. xxxii, pp. 41–48. 1861.
Juratrias. Pennsylvania.

New Red sandstone, Frazer. Am. Inst. Mg. Engrs., Trans., vol. v, p. 494. 1877.
Juratrias.

New Red, Frazer. 2d Pa. Geol. Surv., Rept. C^3, pp. 13–16. 1880.
Juratrias. Pennsylvania.

New Red, Hall. 2d Pa. Geol. Surv., Rept. C^6, pp. 20–24. 1881.
Juratrias. Pennsylvania.

New Red, Lyman. Am. Phil. Soc., Proc., vol. xxxiii, p. 192. 1894.
Juratrias. Eastern U. S.

New Red, Lyman. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2589–2638. 1895.
Juratrias. Pennsylvania, New Jersey. Includes Pottstown, Perkasie, Lansdale, Gwynedd, and Norristown shales. Exact syn. Newark.

New Red, Hopkins. Pa. State Coll. Ann. Rept. for 1896, Appendix, p. 45, et seq. 1897.
Juratrias. Pennsylvania.

New Richmond sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. xxii and 11, 37, 73, 388. 1888.
Cambrian. Included in Lower Magnesian.

New Richmond sandstone, Keyes. Iowa Geol. Surv., 1st Ann. Rept., vol. i, p. 23. 1893.
Silurian. Iowa. Included in Lower Silurian, Lower Magnesian limestone, and St. Peter sandstone.

New Richmond sandstone, Hall and Sardeson. Geol. Soc. Am., Bull., vol. vi, pp. 167, 179. 1895.
Upper Cambrian. Wisconsin. Included in Magnesian series. Includes Elevator B.

New River system, Fontaine. Am. Jour. Sci., 3d ser., vol. vii, p. 463. 1874.

New River system, Platt. 2d Pa. Geol. Surv., Rept. 4^2, pp. xxiv–xxvi. 1877.

New River coal group, Lesley. 2d Pa. Geol. Surv., Rept 4^3, p. xxiii. 1877.

New River coal group, White. U. S. Geol. Surv., Bull., No. 65, p. 202. 1891.
Carboniferous. Ohio, Pennsylvania, and West Virginia. Included in Pottsville conglomerate series. Includes Sharon coal, Fire Creek and Quinnemont beds.

New River coal series, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1665. 1895.
Carboniferous. Pennsylvania. Included in No. x, Pocono formation. Exact syn. No. xc.

New River coal series, White. W. Va. Geol. Surv., vol. i, p. 202. 1899.
Carboniferous. West Virginia.

New Scotland beds, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Devonian. New York. Included in Helderbergian.

New Scotland beds, Weller. N. J. Geol. Surv., Rept., 1899, p. 32. 1900.
Devonian. New Jersey.

New Ulm quartzite, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, p. xxii. 1888.
Minnesota.

New York transition system, Emmons. Geol. of New York, part ii, pp. 99–127. 1842.
Paleozoic. New York. Includes Champlain, Ontario, Helderberg, and Erie groups.

New York system, Vanuxem. Geol. of N. Y., pt. iii, pp. 11–16, 24–194. 1842.
Paleozoic. New York. Includes all subdivisions from Potsdam to Catskill, inclusive.

New York system, Hall. Geol. of N. Y., part iv, 4th Geol. Dist., pp. 18 et seq., 500-515, 516-520. 1843.
Paleozoic. New York. Includes all subdivisions from Potsdam to Chemung, inclusive. Twenty-eight subdivisions in all.

New York system, Emmons. Agric. of N. Y., vol. i, pp. 113-199. 1846.
Silurian. New York. Includes Champlain, Ontario, Helderberg, and Erie divisions.

New York system, Williams. U. S. Geol. Surv., Bull. No. 80, p. 59. 1891.
Paleozoic. New York.

Newark, Redfield. Am. Jour. Sci., 2d ser., vol. xxii, p. 357; Am. Assoc. Adv. Sci., Proc., vol. x, p. 181. 1856.

Newark, Darton. U. S. Geol. Surv., Bull. No. 67. 1890.
Juratrias. New Jersey.

Newark, Russell. U. S. Geol. Surv., Bull. No. 85, p. 16. 1892.
Juratrias.

Newark, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 10. 1894.
Juratrias. Virginia, Maryland, and West Virginia.

Newark system, Keith. U. S. Geol. Surv., 14th Ann. Rept., pt. ii, p. 345. 1894.
Juratrias. Maryland and Virginia.

Newark diabase, Keith. U. S. Geol. Surv., 14th Ann. Rept., pt. ii, p. 352. 1894.
Maryland and Virginia.

Newark, Lyman. Am. Phil. Soc., Proc., vol. xxxiii, pp. 5, 9. 1894.
Juratrias. Eastern United States.

Newark, Lyman. Jour. of Geol., vol. ii, pp. 59-61. 1894.
Juratrias.

Newark, Gilbert. Jour. of Geol., vol. ii, pp. 55-59. 1894.
Juratrias.

Newark, Davis and Griswold. Geol. Soc. Am., Bull., vol. v, p. 516. 1894.
Trias. Connecticut.

Newark, Hitchcock. Science, new ser., vol. i, pp. 74-77. 1895.
Juratrias, Triassic. Connecticut.

Newark, Russell. Science, new ser., vol. i, p. 266. 1895.
Juratrias. General.

Newark system, Kummel. N. J. Geol. Surv., Rept., 1896, pp. 25-88. 1897.
Juratrias. New Jersey. Includes Stockton, Lockatong, and Brunswick series.

Newark system, Kummel. Jour. of Geol., vol. v, pp. 541-562. 1897.
Juratrias. New Jersey. Includes Stockton series; Lockatong and Brunswick shale series.

Newark, Clark. Md. Geol. Surv., vol. i, p. 156. 1897.
Triassic. Maryland.

Newark system, Kummel. N. J. Geol. Surv., Rept., 1897, pp. 23-159. 1898.
Juratrias. New Jersey. Includes Stockton, Lockatong, and Brunswick series.

Newark, Clark. Md. Geol. Surv., vol. ii, p. 170. 1898.
Triassic. Maryland.

Newark, Kummel. Jour. of Geol., vol. vii, pp. 23-52. 1899.
Juratrias. New York, New Jersey.

Newark, Clark. Md. Geol. Surv., vol. iii, p. 91. 1899.
Triassic. Maryland.

Newark, Shaler and Woodworth. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, pp. 396-418. 1899.
Juratrias. Virginia.

Newland limestone, Walcott. Geol. Soc. Am., Bull., vol. x, pp. 199, 206. 1899.
Algonkian, Pre-Cambrian. Montana. Included in Belt terrane.

Newland limestone, Weed. U. S. Geol. Surv., 20th Ann. Rpt., pt. iii, p. 282. 1900.
Algonkian. Montana. Included in Belt terrane.

Newman limestone, Campbell. U. S. Geol. Surv., Bull., No. 111, p. 38. 1893.
Carboniferous. Virginia. Included in Coal Measures.

Newman limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 12. 1894.
Carboniferous. Kentucky, Virginia, and Tennessee.

Newman limestone, Keith. Wash. Phil. Soc., Bull., vol. xii, p. 74. 1895.
Carboniferous. Tennessee. Included in Lower Carboniferous.

Newman limestone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25, 27. 1895, 1896.
Carboniferous. Tennessee and North Carolina.

Newman limestone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Carboniferous. Tennessee.

Newman limestone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 40. 1897.
Carboniferous. Tennessee. Part. syn. Bangor limestone.

Newman limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 47. 1898.
Carboniferous. Kentucky. Included in Mississippian series.

Newman limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 46. 1898.
Carboniferous. Kentucky.

Newman limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 53. 1899.
Carboniferous. Tennessee. Included in Mississippian series.

Newman limestone, U. S. Geol. Surv., Geol. Atlas of U. S. Folio No. 59. 1899.
Carboniferous. Virginia and Tennessee.

Newport conglomerate, Rogers. Boston Soc. Nat. Hist., Proc., vol. xviii, 1875–76, p. 97. 1875.

Newport limestone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 1594. 1892.
Devonian. Pennsylvania. Included in Catskill, No. ix.

Newport Neck shales, Shaler, Woodworth and Foerste. U. S. Geol. Surv., Mon., vol. xxxiii, p. 383. 1899.
Cambrian (?). Rhode Island.

Newtonville limestone, Andrews. Ohio Geol. Surv., Rept. Prog. 1869, p. 93. 1870.
Ohio. Exact syn. Maxville limestone.

Newtonville limestone, Andrews. Ohio Geol. Surv., Rept. Prog., 1869, p. 96. 1871.
Ohio. Exact syn. Maxville limestone.

Newtonville limestone, Andrews. Ohio Geol. Surv., vol. i, pt. i, p. 314. 1873.
Carboniferous. Ohio. Included in Coal Measures. Exact syn. Maxville limestone.

Newtonville limestone, Orton. Ohio Geol. Surv., vol. vi, pp. 3, 43. 1888.
Carboniferous. Ohio. Exact syn. Maxville limestone and Subcarboniferous limestone.

Niagara limestone, Hall. Am. Jour. Sci., 1st ser., vol. xlii, p. 58. 1842.

Niagara shale, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, p. 232. 1842.
Middle Silurian.

Niagara sandstone, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, p. 230. 1842.
Lower Silurian.

Niagara group, Vanuxem. Geol. of N. Y., pt. iii, pp. 90–94. 1842.
Paleozoic. New York. Included in New York system. Includes Lockport group, Upper part Proteau group, Geodiferous limerock, and Calciferous slate.

Niagara limestone, Rogers. Am. Phil. Soc., Trans., new ser., vol. viii, p. 274. 1842.
Silurian. Canada and New York.

Niagara group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 80–117. 1843.
Paleozoic. New York. Included in New York system. Includes Geodiferous limerock and Calciferous slate, Lockport limestone, Rochester shale, Niagara shale, and Niagara limestone. Part. syn. Proteau group, No. 6 of Pennsylvania Survey.

Niagara shale, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 81–83. 1843.
Paleozoic. New York. Included in Niagara group.

Niagara limestone, Hall. Geol. of N. Y. pt. iv, 4th Geol. Dist., pp. 84–97. 1843.
Paleozoic. New York. Included in Niagara group.

Niagara group, Emmons. Agric. of N. Y., vol. i, pp. 150–152. 1846.
New York. Included in Ontario division of New York system. Includes Niagara shale and Niagara limestone. Exact syn. Geodiferous limerock and Calciferous slate, Lockport limestone and Rochester slate. Part. syn. Proteau group of Ann. Repts. of New York.

Niagara limestone, Emmons. Agric. of New York, vol. i, pp. 151–152. 1846.
New York. Included in Niagara group of Ontario division of New York system.

Nigara group, Loomis. Am. Jour. Sci., 2d ser., vol. i, p. 222. 1846.
Silurian. Tennessee.

Niagara limestone, Murray. Can. Geol. Surv., Rept., 1847–1848. 1849.
Silurian. Ontario.

Niagara group, Hale. Foster and Whitney's Rept. on Geol. of Lake Superior district, pt. ii, p. 156. 1851.
Silurian. Lake Superior region.

Niagara group, Hall. Pal. of New York, vol. ii, pp. 2–4, 106–108. 1852.
Silurian. New York.

Niagara group, Hall. Am. Jour. Sci., 2d ser., vol. xvii, p, 192. 1854.
Silurian. Michigan.

Niagara limestone, Hall. Iowa Geol. Surv., vol. i, p. 71. 1858.
Silurian. Iowa.

Niagara limestone, Whitney. Iowa Geol. Surv., vol. i, pt. i, pp. 292–295, 362–368. 1858.
Silurian. Iowa.

Niagara, Safford. Am. Jour. Sci., 2d ser., vol. xxxi, p. 207. 1861.
Silurian. Tennessee. Includes Variegated limestone, and glade-forming limestones and shales, or Gray limestones and shales.

Niagara limestone, Whitney. Rept. on Upper Mississippi lead region, p. 186. 1862.
Silurian. Wisconsin.

Niagara formation, Logan. Can. Geol. Surv., Rept. 1843–63, pp. 321–336. 1863.
Middle Silurian. Canada. Included in Anticosti group.

Niagara group, Chapman. Can. Inst., new ser., vol. viii, pp. 208–216. 1863.
Silurian. Canada. Included in Middle Silurian. Includes Medina and Clinton, Niagara and Guelph formations. Part. syn. Anticosti group (+ Guelph).

Niagara limestone, Worthen. Ill. Geol. Surv., vol. i, pp. 129–136. 1866.
Silurian. Illinois.

Niagara formation, Bell. Can. Geol. Surv., Rept. 1863–66, pp. 174, 176. 1866.
Middle Silurian. Canada.

Niagara formation, Bell. Rept. 1866–69, pp. 128–131. 1866, 1871.
Silurian. Canada.

Niagara limestone, Whitney. Ill. Geol. Surv., vol. i, pp. 177–186. 1866.
Silurian. Illinois. Exact syns. Upper Magnesian, Corraline and Pentamerus beds, and Mound limestone. Part. syn. Cliff limestone.

Niagara group, Bannister. Ill. Geol. Surv., vol. iii, pp. 245–253. 1868.
Silurian. Illinois.

Niagara limestone, Worthen. Ill. Geol. Surv., vol. iii, pp. 116–117. 1868.
Silurian. Illinois.

Niagara group, Safford. Geol. of Tennessee, by Safford, pp. 291–322. 1869.
Silurian. Tennessee. Includes Meniscus limestone, Dyestone group, White Oak Mount sandstone, and Clinch Mount sandstone. Exact syn. Dana's Niagara period. Part. syns. Medina, Clinton, and Niagara epochs.

Niagara group, Bannister. Ill. Geol. Surv., vol. iv, pp. 114, 131, 139. 1870.
Silurian. Illinois.

Niagara limestone, Bradley. Ill. Geol. Surv., vol. iv, pp. 213, 232. 1870.
Silurian. Illinois.

Niagara limestone, Worthen. Ill. Geol. Surv., vol. iv, p. 6. 1870.
Silurian. Illinois.

Niagara, Worthen. Am. Assoc. Adv. Sci., Proc., vol. xix, p. 172. 1870.
Silurian. Illinois.

Niagara group, White. Iowa Geol. Surv., vol. i, pp. 182–184. 1870.
Silurian. Iowa. Includes Niagara limestone. Part. syn. Le Claire limestone.

Niagara limestone, Hunt. Am. Jour. Sci., 3d ser., vol. i, pp. 420–424. 1871.
Silurian. Illinois.

Niagara, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxii, p. 321. 1873.
Silurian. New York, Mississippi Valley. Exact syn. Coralline limestone.

Niagara, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 62, 104, 128. 1873.
Silurian. Ohio.

Niagara, Orton. Ohio Geol. Surv., vol. i, pt. i, p. 464. 1873.
Silurian. Ohio.

Niagara, Winchell. Ohio Geol. Surv., vol. i, pt. i, pp. 596, 613, 627, 741. 1873.
Silurian. Ohio.

Niagara, Shumard. Mo. Geol. Surv., Rept., 1855–1871, pp. 261, 281, 296. 1873.
Silurian. Missouri. Included in Upper Silurian.

Niagara limestone, Worthen. Ill. Geol. Surv., vol. v, p. 223. 1873.
Silurian. Illinois.

Niagara limestone, Shaw. Ill. Geol. Surv., vol. v, pp. 15–16, 33–35, 64–65, 78–79, 132–134, 149–152, 187. 1873.
Silurian. Illinois.

Niagara, Orton. Ohio. Geol. Surv., vol. ii, p. 667. 1874.
Silurian. Ohio. Included in Upper Silurian. Includes Guelph or Cedarville beds, Springfield beds, West Union beds, Niagara beds, Niagara shale, and Dayton stone.

Niagara, Winchell. Ohio Geol. Surv., vol. ii, pp. 229, 316, 354, 359, 370, 398. 1874.
Silurian. Ohio.

Niagara limestone, Killebrew and Safford. Resources of Tenn., pp. 38–39. 1874.
Silurian. Tennessee. Included in Niagara period.

Niagara, Hall. Regents Univ. of N. Y., 27th Ann. Rept., pp. 117–131. 1875.
Silurian. New York. Includes Coralline limestone of New York.

Niagara limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., p. 53. 1876.
Lower Silurian. Minnesota.

Niagara, Smith. Ala. Geol. Surv., Rept., 1875, pp. 26, 99. 1876.
Silurian. Alabama. Included in Upper Silurian.

Niagara, Hotchkiss. A Geographical and Political Summary of Virginia, p. 22. 1876.
Upper Silurian. Virginia. Exact syns. Surgent, Levant (Formation iv, Rogers).

Niagara, Ashburner. Am. Phil. Soc. Proc., vol. xvi, p. 556. 1877.
Silurian. Pennsylvania.

Niagara limestone, Chamberlin. Geol. of Wis., vol. ii, pp. 335–371. 1877.
Upper Silurian. Wisconsin.

Niagara group, Shaler. Ky. Geol. Surv., vol. iii, new ser., pp. 35, 163–169. 1877.
Silurian. Kentucky. Exact syn. includes all New York formations from top of Medina sandstone to top of Niagara period.

Niagara, Newberry. Ohio Geol. Surv., vol. iii, p. 7. 1878.
Silurian. Ohio. Included in Upper Silurian.

Niagara, Hussey. Ohio Geol. Surv., vol. iii, pp. 443, 447. 1878.
Silurian. Ohio.

Niagara, Orton. Ohio Geol. Surv., vol. iii, pp. 386, 408. 1878.
Silurian. Ohio.

Niagara, St. John. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., p. 484. 1879.
Silurian. Idaho.

Niagara group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, pp. 268, 290. 1881.
Silurian.

Niagara, Chamberlin. Geol. of Wis., vol. i, pp. 178, 181–196. 1883.
Upper Silurian. Wisconsin. Includes Mayville beds, Waukesha beds, Racine beds, Byron beds, Lower and Upper Coral beds, and Guelph beds.

Niagara, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxxi, p. 46. 1883.
Silurian. Eastern U. S., Mississippi Valley.

Niagara limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 302. 1884.
Minnesota.

Niagara group, Linney. Ky. Geol. Surv. (Proctor), Geol. of Clark and Montgomery Cos. 1884.
Silurian. Kentucky. Included in Upper Silurian.

Niagara, Linney. Ky. Geol. Surv., Geol. of Spencer and Nelson Cos., pp. 36–45. 1884.
Silurian. Kentucky.

Niagara, Knott. Ky. Geol. Surv., Geol. of Marion Co., p. 15. 1885.
Silurian. Kentucky.

Niagara, Linney. Ky. Geol. Surv., Geol. of Bath Co., p. 21. 1886.
Silurian. Kentucky.

Niagara, Ringneberg. Am. Geol., vol. i, pp. 264–272. 1888.
Silurian. New York.

Niagara group, Miller. N. A. Geol. and Pal., p. 50. 1889.

Niagara group, Orton. U. S. Geol. Surv., 8th Ann. Rept., pt. ii, p. 561. 1889.
Silurian. Ohio, Indiana.

Niagara group, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 18–20. 1890.
Silurian. Ohio. Includes Niagara limestone and shale, Guelph limestone and Hillsboro sandstone. Part. syn. Guelph limestone.

Niagara limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, pp. 51, 60, 81, 213.
Silurian. Arkansas. Includes Meniscus (Tenn.), Galt or Guelph (Canada), and Leclaire (Iowa) limestone, and Athens (Ill.) marble. Part. syn. Cliff limestone (Ohio).

Niagara, Phinney. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 632. 1891.
Silurian. Indiana.

Niagara limestone, McGee. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 323. 1891.
Silurian. Iowa.

Niagara, Prosser. Roch. Acad. Sci., Proc., vol. ii, pp. 50–124. 1892.
Silurian. New York.

Niagara limestone, Keyes. Iowa Geol. Surv., 1st Ann. Rept., vol. i, p. 30. 1893.
Silurian. Iowa. Included in Upper Silurian.

Niagara, Houser. Iowa Geol. Surv., 1st Ann. Rept., vol. i, pp. 199–207. 1893.
Silurian. Iowa.

Niagara, Brumell. Geol. Soc. Am., Bull., vol. iv, pp. 227, 231. 1893.
Silurian. Ontario.

Niagara, Prosser. Geol. Soc. Am., Bull., vol. iv, pp. 100, 108. 1893.
Silurian. New York.

Niagara, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 206–207, 218. 1894.
Silurian. New York.

Niagara limestone, Udden. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 834. 1896.
Silurian. Illinois.

Niagara series, Calvin. Iowa Geol. Surv., vol. v, pp. 48–60. 1896.
Silurian. Iowa. Includes Delaware, Leclaire, Anamosa, and Bertram stages.

Niagara limestone, Luther. N. Y. State Geol., 15th Ann. Rept., pp. 247–250. 1897.
Silurian. New York.

Niagara formation, Buckley. Wis. Geol. and Nat. Hist. Surv., Bull. No. 4, Econ. ser., No. 2, pp. 298–348. 1898.
Wisconsin.

Niagara limestone, Calvin. Iowa Geol. Surv., vol. viii, pp. 144–159, 216–220. 1898.
Silurian. Iowa. Includes Delaware stage.

Niagara, Barlow. Can. Geol. Surv., Rept. new ser., vol. x, p. 123I. 1898.
Silurian. Ontario and Quebec.

Niagara group, Luther. N. Y. State Geol., 16th Ann. Rept., p. 204. 1899.
Silurian. New York.

Niagaran, Clarke and Schuchert. Science, new ser., vol. x, pp. 876–877. 1899.
Silurian. New York. Includes Clinton beds, Rochester shale, Lockport limestones, and Guelph dolomite.

Niagara, Clark. Md. Geol. Surv., vol. iii, p. 97. 1899.
Silurian. Maryland. Included in Silurian. Exact syn. Lewiston (Helderberg).

Niagara limestone, Calvin and Bain. Iowa Geol. Surv., vol. x, p. 445. 1900.
Silurian. Iowa.

Niagara formation, O'Harra. Md. Geol. Surv., Allegany County, p. 91. 1900.
Silurian. Maryland.

Nichols shale, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 20. 1895.
Cambrian. Tennessee. Included in Chilhowee series.

Nichols shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios 16, 25. 1895, 1896.
Cambrian. Tennessee and North Carolina.

Nicola series, Dawson. Can. Geol. Surv., Rept., 1877–78, pp. 74B–81B, 171B. 1879.
Triassic(?). British Columbia. Red Beds (E. of Wahsatch) and Star Peak group (W. of Wahsatch) of 40th Par. Survey.

Nicola, Dawson. Can. Geol. Surv., new ser., vol. vii, pp. 26B, 49B–58B, 112B–114B, 130B–146B. 1896.
Juratrias. British Columbia.

Nicollet clay, Harris. Phil. Acad. Nat. Sci., Proc., vol. ii, pp. 235–237. 1846.
Cretaceous.

Nilkoka beds, Brooks. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 472, 480. 1900.
Alaska.

Nineveh limestone, White. U. S. Geol. Surv., Bull. No. 65, p. 32. 1891.
Carboniferous. Pennsylvania, West Virginia. Included in Permo-Carboniferous, Dunkard Creek. Exact syn. Limestone No. 10.

Niobrara division, Meek and Hayden. Phil. Acad. Nat. Sci., Proc., vol. xiii, pp. 419, 422. 1862.
Lower Cretaceous. Nebraska. Exact syn. Formation No. iii.

Niobrara, Hayden. Am. Phil. Soc., Trans., new ser., vol. xii, p. 1, et seq. 1863.
Cretaceous. Northwest.

Niobrara, Hayden. U. S. Geol. Surv. of Wyoming, pp. 87, 90. 1871.
Cretaceous. Included in Lower Cretaceous. Exact syn. Formation No. 3.

Niobrara, Hayden. U. S. Geol. Surv. of Terr., 1–3d Ann. Repts., pp. 49, 54. 1873.
Cretaceous. Exact syn. Formation No. 3.

Niobrara, Cope. U. S. Geol. and Geog. Surv., Mon., vol. ii, pp. 16–24. 1875.
Cretaceous.

Niobrara, Mudge. U. S. Geol. and Geog. Surv. of Terr., Bull., vol. ii, p. 214. 1876.
Cretaceous. Kansas.

Niobrara group, Meek. U. S. Geol. and Geog. Surv. of Terr., Mon., vol. ix, pp. xxx–xxxiii. 1876.
Cretaceous.

Niobrara, Mudge. U. S. Geol. and Geog. Surv. of Terr., 9th Ann. Rept., p. 281. 1877.
Cretaceous. Kansas. Includes Niobrara and Fort Hays.

Niobrara, Hague. U. S. Geol. Expl. of 40th Parallel, vol. ii, pp. 42, 67–71. 1877.
Tertiary. Wyoming. Included in Pliocene.

Niobrara, King. U. S. Geol. Expl. of 40th Parallel, vol. i, p. 425. 1878.
Tertiary. Colorado, Wyoming. Included in Pliocene.

Niobrara group, Newton. Geol. of Black Hills., pp. 173–174. 1880.
Cretaceous. South Dakota.

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Cretaceous. Kansas.

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Cretaceous. Canada.

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Upper Cretaceous. Kansas.

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Cretaceous. Iowa. Exact syn. Inoceramus beds.

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Cretaceous. Colorado.

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Cretaceous. Nebraska and Dakota. Included in Upper Cretaceous.

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Cretaceous. Nebraska and Iowa.

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Cretaceous. Iowa.

Niobrara, Emmons, Cross and Eldridge. U. S. Geol. Surv., Mon., vol xxvii, p. 66. 1896.
Cretaceous. Colorado. Included in Colorado group.

Niobrara group, Gilbert. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 566. 1896.
Cretaceous. Colorado. Includes Timpas formation and Apishapa formation.

Niobrara, Williston. Kansas Univ. Geol. Surv., vol. ii, pp. 235–246. 1897.
Upper Cretaceous. Kansas.

Niobrara group, Logan. Kansas Univ. Geol. Surv., vol. ii, pp. 219–221. 1897.
Upper Cretaceous. Kansas. Includes Fort Hays limestone, and Pteranodon beds in Smoky Hill chalk.

Niobrara formation, Gilbert. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 36. 1897.
Cretaceous. Colorado.

Niobrara, Adams. Kan. Univ. Geol. Surv., vol. iv, pp. 24–27. 1898.
Upper Cretaceous. Kansas. Includes Pteranodon beds (Herperornis and Rudistes beds) and Fort Hays beds.

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Cretaceous. Colorado. Apishapa and Timpas formations.

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Cretaceous. Kansas, Nebraska. Includes Fort Hays limestone, Pteranodon beds.

Nipigon group, Spencer. Can. Nat., 2d ser., vol. viii, pp. 55–70. 1878.
Canada. Exact syn. Copper-bearing series.

Nipigon series, Bell. Can. Geol. Surv., Rept. 1876–77, pp. 213–215. 1878.
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Canada.

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Paleozoic. British Columbia.

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Cambrian. British Columbia.

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Cretaceous. Iowa.

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Cretaceous. Iowa.

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Cretaceous. Iowa. Exact syn. Dakota (?).

Nodaway limestone, Gallager. Mo. Geol. Surv., Bien. Rept., p. 53. 1898.
Upper Carboniferous. Missouri. Included in Upper Coal Measures.

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Tertiary. Mexico.

Noix oölite, Keyes. Iowa Acad. Sci., Proc., vol. v, p. 62. 1898.
Silurian. Iowa.

Nolichucky shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 12. 1894.
Cambrian. Kentucky, Virginia, and Tennessee.

Nolichucky shale, Walcott. Geol. Soc. Am., Bull., vol. v, p. 195. 1894.
Cambrian. Virginia.

Nolichucky shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25, 27. 1895, 1896.
Cambrian. Tennessee and North Carolina.

Nolichucky shale, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.
Cambrian. Tennessee. Included in Conasauga shale.

Nolichucky shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44, 1897.
Cambrian. Virginia, West Virginia.

Nolichucky shale, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
Cambrian. Virginia, Tennessee.

Norian, Hitchcock. Am. Assoc. Adv. Sci., Proc., vol. xxi, p. 136. 1872.
Archean. New Hampshire.

Norian, Crosby. Report on Geol. Map of Mass., pp. 7–11. 1876.
Massachusetts.

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Archean. Canada.

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Canada.

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Eozoic. N. E. America. Included in Archean. Includes Upper Laurentian or Labradorian.

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Azoic.

Norian, Pumpelly. Geol. Soc. Am., Bull., vol. iv, p. 383. 1893.
Archean. Canada (?).

Normandy limestone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S. Folio No. 53. 1899.
Silurian. Tennessee. Exact syns. Chickamauga limestone, Nashville series.

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Juratrias, Permian (?). Pennsylvania. Included in New Red.

Norristown stage, Stevenson. N. Y. Acad. Sci., Trans., vol. xv, p. 51. 1896.
Carboniferous. Arkansas, Indian Territory.

North Denison, Hill. Geol. Soc. Am., Bull., vol. v, p. 302. 1894
Cretaceous. Indian Territory. Included in Denison beds, Washita division.

North Haven greenstone, Smith. Geol. of the Fox Islands, pp. 13–17. 1896.
Pre-Silurian. Maine.

North Park group, King. U. S. Geol. Expl. of 40th Parallel, vol. i, p. 431. 1878.
Tertiary. Wyoming. Included in Pliocene.

North Valley Hill sandstone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. i, p. 166 et seq. 1892.
Cambrian. Pennsylvania.

North Vernon limestone, Borden. Indiana Geol. Surv., 7th Ann. Rept., 1875, pp. 148, 160. 1876.
Devonian. Indiana.

North Vernon bluestone, Cox. Indiana Geol. Surv., 8th, 9th, and 10th Ann. Repts., 1876, 1877, 1878, p. 88. 1879.
Indiana.

North Vernon stone, Elrod. Indiana Dept. Geol. and Nat. Hist., 11th Ann. Rept., 1881, pp. 174, 186. 1882.
Carboniferous. Indiana.

Norton formation, Campbell. U. S. Geol. Surv., Bull. No. 111, p. 34. 1893.
Carboniferous. Virginia. Included in Coal Measures. Exact syn. Lower Coal Measures.

Norton, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 12. 1894.
Carboniferous. Kentucky, Virginia, Tennessee.

Norton zone, Williston. Kan. Univ. Quart., vol. iv., p. 251. 1896.
Upper Cretaceous. Kansas. Included in Smoky Hill chalk.

Norton formation, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 59. 1899.
Carboniferous. Virginia and Tennessee.

Novaculite series, Ashley. Am. Phil. Soc., Proc., vol. xxxvi, pp. 228 et seq. 1897.
Carboniferous. Arkansas.

Nulato sandstone, Spurr. U. S. Geol. Surv., 18th Ann. Rept., pt. iii, p. 196. 1898.
Tertiary. Alaska. Included in Miocene.

Nulato beds, Becker. U. S. Geol. Surv., 18th Ann. Rept., pt. iii, pl. i. 1898.
Alaska.

Numbers I, II, III, IV, Meek and Hayden. Am. Jour. Sci., 2d ser., vol. xxviii, pp. 219–226. 1859.
Cretaceous. Kansas and Nebraska.

Number I, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 20–23. 1838.
Cambrian. Pennsylvania.

Number I, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 38, 46. 1840.
Cambrian. Pennsylvania.

Number I, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. i, pp. 165–186. 1892.
Cambrian. Pennsylvania. Includes Chiques sandstone, Hellam quartz, North Valley, Hill sandstone, Potsdam, and Upper Cambrian quartzite. Exact syn. Primal sandstone.

Number II, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 23–30. 1838.
Silurian. Pennsylvania.

Number II, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 41, 44, 53, 99, 134. 1840.
Silurian. Pennsylvania.

Number II, Prime. 2d Pa. Geol. Surv., Rept. D, pp. 7–15. 1875.
Silurian. Pennsylvania. Includes Calciferous, Chazy, Birdseye, and Black River of New York.

Number II, Prime. 2d Pa. Geol. Surv., Rept. D^2, pp. 11–22. 1878.
Silurian. Pennsylvania. Exact syn. Siluro-Cambrian.

Number II, Hall. 2d Pa. Geol. Surv., Rept. C^6, pp. 34–38. 1881.
Silurian. Pennsylvania.

Number II, Prime. 2d Pa. Geol. Surv., Rept. D^3, pt. i, pp. 161–201. 1883.
Silurian. Pennsylvania.

Number II, D'Invilliers. 2d Pa. Geol. Surv., Rept. D^3, pt, ii, pp. 137–196. 1883.
Silurian. Pennsylvania. Includes Auroral and Matinal of Rogers, Calciferous, Chazy, etc., of New York.

Number II, Ewing. 2d Pa. Geol. Surv., Rept. T^4, pp. 401–424. 1884.
Silurian. Pennsylvania. Includes Trenton, Chazy, Calciferous, etc. Exact syn. Great Valley limestone.

Number III, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 30–36. 1838.
Silurian. Pennsylvania.

Number III, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 64, 101, 104. 1840.
Silurian. Pennsylvania.

Number III, Sanders. 2d Pa. Geol. Surv., Rept. D^3, pt. i, pp. 83–85. 1883.
Silurian. Pennsylvania. Exact syn. Hudson River.

Number III, Lesley. 2d Pa. Geol. Surv., Rept. D^3, pt. i, pp. 32–35. 1883.
Silurian. Pennsylvania. Exact syn. Hudson River.

Number III, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, pp. 424–427. 1884.
Silurina. Pennsylvania. Includes Hudson River and Utica.

Number III, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. i, pp. 525–624. 1892.
Silurian. Pennsylvania. Includes Utica and Hudson River slate.

Number IV, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 36–39. 1838.
Silurian. Pennsylvania.

Number IV, Rogers. Pa. State Geol., 3d Ann. Rept., pp. 47–49. 1839.
Silurian. Pennsylvania.

Number IV, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 69, 102, 105, 137. 1840.
Silurian. Pennsylvania.

Number IV, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, pp. 427–429. 1884.
Silurian. Pennsylvania. Includes Oneida and Medina.

Number IV, D'Invilliers. 2d Pa. Geol. Surv., Rept. F⁴, pp. 78–79. 1891.
Silurian. Pennsylvania. Includes Medina and Oneida.

Number IV, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. i, pp. 625–719. 1892.
Silurian. Pennsylvania. Includes Oneida and Medina.

Number V, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 39–46. 1838.
Silurian. Pennsylvania.

Number V, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 78, 140. 1840.
Silurian. Pennsylvania.

Number V, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, p. 429. 1884.
Silurian. Pennsylvania. Exact syn. Clinton group.

Number V, D'Invilliers. 2d Pa. Geol. Surv., Rept. F⁴, pp. 62–78. 1891.
Silurian. Pennsylvania. Includes Salina and Clinton.

Number V, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 721–897. 1892.
Silurian. Pennsylvania. Includes Clinton, Niagara, Salina, Barree group, McCoytown sandstone, Lost Creek limestone, Bloomsburg shale, and Bridgeport sandstone.

Number VI, Rogers. Pa. State. Geol., 2d Ann. Rept., pp. 46–50. 1838.
Silurian. Pennsylvania.

Number VI, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 84–143. 1840.
Silurian. Pennsylvania. Exact syn. Fossiliferous limestone.

Number VI, Ewing. 2d Pa. Geol. Surv., Rept. T⁴, pp. 429–430. 1885.
Silurian. Pennsylvania. Exact syn. Lower Helderberg.

Number VI, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 898–1033. 1892.
Silurian. Pennsylvania. Includes Stormville shale, Bossardville limestone, Poxono Island shale, Bastard limestone, Lewistown limestone, and Clarks Mill shale. Exact syn. Lower Helderberg.

Number VII, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 50–52. 1838.
Devonian. Pennsylvania.

Number VII, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 88–143. 1840.
Devonian. Pennsylvania. Exact syn. Fossiliferous sandstone.

Number VII, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1034–1142. 1892.
Devonian. Pennsylvania. Includes Oriskany, Canda-Galli and Schoharie grits.

Number VIII, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 52–59. 1838.
Devonian. Pennsylvania. Exact syn. Olive slate.

Number VIII, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 91, 146. 1840.
Devonian. Pennsylvania. Exact syn. Olive slate.

Number VIII, Chance. 2d Pa. Geol. Surv., Rept. G⁴, pp. 105–106. 1880.
Devonian. Pennsylvania. Includes Chemung and Portage.

Number VIII, Stevenson. 2d Pa. Geol. Surv., Rept. T², pp. 75–84. 1882.
Devonian. Pennsylvania. Includes Chemung, Portage, Genesee, Hamilton, and Marcellus.

Number VIII, D'Invilliers. 2d Pa. Geol. Surv., Rept. F^4, pp. 45–50. 1891.
Devonian. Pennsylvania. Includes Chemung, Portage, Genesee, Hamilton, and Marcellus.

Number VIIIa, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1143–1193. 1892.
Devonian. Pennsylvania. Includes Upper Helderberg, Onondaga, and Corniferous limestones.

Number VIIIb, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1194–1236. 1892.
Devonian. Pennsylvania. Exact syn. Marcellus, black shale.

Number VIIIc, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1236–1307. 1892.
Devonian. Pennsylvania. Exact syn. Hamilton.

Number VIIId, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1307–1322. 1892.
Devonian. Pennsylvania. Exact syn. Tully limestone.

Number VIIIe, Lesley. 2d Pa. Geol Surv., Final Rept., vol. ii, pp. 1323–1335. 1892.
Devonian. Pennsylvania. Exact syns. Genesee black slate, Cadent Upper black slate.

Number VIIIf, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1337–1370. 1892.
Devonian. Pennsylvania. Includes Cashaqua shale and Gardeau shale. Exact syn. Portage.

Number VIIIg, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1371–1566. 1892.
Devonian. Pennsylvania. Exact syn. Chemung.

Number IX, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 59–63. 1838.
Devonian. Pennsylvania.

Number IX, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 97, 147. 1840.
Devonian. Pennsylvania.

Number IX, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1567–1627. 1892.
Devonian. Pennsylvania. Exact syn. Catskill.

Number X, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 63–65. 1838.
Carboniferous. Pennsylvania.

Number X, Rogers. Pa. State Geol., 4th Ann. Rept., p. 98. 1840.
Carboniferous. Pennsylvania.

Number X, Platt. 2d Pa. Geol. Surv., Rept. H^4, p. 311. 1878.
Carboniferous. Pennsylvania. Exact syns. Pocono-Vespertine.

Number X, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1629–1789. 1895.
Carboniferous. Pennsylvania. Exact syn. Pocono formation.

Number XI, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 65–68. 1838.
Carboniferous. Pennsylvania.

Number XI, Rogers. Pa. State Geol., 4th Ann. Rept., p. 98 et seq. 1840.
Carboniferous. Pennsylvania.

Number XI, Platt. 2d Pa. Geol. Surv., Rept. H^4, p. 311. 1878.
Carboniferous. Pennsylvania. Exact syns. Mauch Chunk red shale, Umbral.

Number XI, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1805–1853. 1895.
Carboniferous. Pennsylvania. Exact syns. Mauch Chunk red shale, Umbral.

Number XII, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 68–71. 1838.
Carboniferous. Pennsylvania.

Number XII, Rogers. Pa. State Geol., 4th Ann. Rept., pp. 123–132, 199. 1840.
Carboniferous. Pennsylvania.

Number XII, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 63–66. 1875.
Carboniferous. Pennsylvania and Ohio.

Number XII, White. 2d Pa. Geol. Surv., Rept. Q^2, pp. 51–70. 1877.
Carboniferous. Pennsylvania. Includes Piedmont or Tionesta sandstone, Mercer limestone, Connoquenessing sandstone, and Quakertown shale.

Number XII, Platt. 2d Pa. Geol. Surv., Rept. H^4, p. 310. 1878.
Carboniferous. Pennsylvania. Exact syn. Pottsville conglomerate.

Number XII, Chance. 2d Pa. Geol. Surv., Rept. G^4, pp. 91–95. 1880.
Carboniferous. Pennsylvania.

Number XII, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1857–1915. 1895.
Carboniferous. Pennsylvania. Includes Homewood or Johnson Run sandstone, Connoquenessing or Kinzua sandstone, and Sharon, Olean or Garland conglomerate. Exact syns. Pottsville conglomerate, Seral conglomerate.

Number XII, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2155–2405. 1895.
Carboniferous. Pennsylvania. Exact syn. Lower Productive Measures, Allegheny River series.

Number XII, Smith. 2d Pa. Geol. Surv., Final Rept., vol. ii, pt. i, pp. 1853–1855, 1920–1923, 1949–1951, 1953, 1959, 1966, 1975, 1984, 2000, 2009, 2025, 2031–2032, 2050, 2054. 1895.
Carboniferous. Pennsylvania. Exact syn. Pottsville conglomerate.

Number XIII, Rogers. Pa. State Geol., 2d Ann. Rept., pp. 71–79. 1838.
Carboniferous. Pennsylvania. Exact syn. Anthracite Coal Measures.

Number XIII, Rogers. Pa. State Geol., 3d Ann. Rept., pp. 82–87. 1839.
Carboniferous. Pennsylvania. Included in Coal Measures.

Number XIV, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2406–2447. 1895.
Carboniferous. Pennsylvania. Exact syns. Barren Measures, Pittsburg series, and Elk River series of West Virginia.

Number XV, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2448–2564. 1895.
Carboniferous. Pennsylvania. Exact syns. Upper Productive or Monongahela River series.

Number XVI, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2565–2588. 1895.
Carboniferous. Pennsylvania. Includes Greene Co. group and Washington Co. group. Exact syns. Upper Barren Measures, and Permo-Carboniferous or Dunkard Creek series.

Nummulite limestone, Lyell. Am. Jour. Sci., 2d ser., vol. iv, pp. 186–191. 1847.
Eocene. Alabama. Exact syn. Orbitolite limestone.

Nunda group, Vanuxem. Geol. of N. Y., pt. iii, p. 172. 1842.
Paleozoic. New York. Included in New York system. Exact syn. Portage group.

Nunda group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 224–241. 1843.
Paleozoic. New York. Included in New York system. Exact syn. Portage group.

Nushagak beds, Spurr. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 173–174, 184. 1900.
Tertiary. Alaska. Included in Neocene.

Nussbaum formation, Gilbert. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 36. 1897.
Colorado. Included in Neocene.

Nussbaum formation, Hills. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 58. 1899.
Colorado. Included in Neocene(?).

Nussbaum formation, Hills. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 68. 1900.
Colorado. Included in Neocene.

Nutzotin series, Brooks. U. S. Geol. Surv., 21st Ann. Rept., pt. ii, p. 359. 1900.
Alaska.

Oak Creek beds, Ward. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, p. 593. 1899.
Cretaceous. South Dakota.

Oak Creek beds, Jenney. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, pp. 568–587, 593. 1899.
Cretaceous. South Dakota. Included in Dakota group.

Oak Grove sands, Dale. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 340. 1898.
Tertiary. Florida.

Oakland limestone lentils, Diller. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 49. 1898.
Oregon. Included in Eocene.

Oakville, Dumble. Jour. of Geol., vol. ii, pp. 556–559. 1894.
Tertiary. Texas. Included in Miocene.

Oakville beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 339. 1898.
Tertiary. Texas. Included in Miocene. Part. syn. Fayette beds.

Ocala group, Dall. Wagner Free Inst. Sci., Trans., vol. iii, pt. ii, p. 209. 1892.
Eocene. Florida. Included in Later Eocene. Exact syn. Nummulite beds of Florida.

Ocala limestone, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, p. 103. 1892.
Tertiary. Florida. Exact syn. Nummulitic beds.

Oceanic series, Hill. Harvard Coll. Mus. Comp. Zool., Bull., vol. xxxiv, pp. 69–85. 1899.
Tertiary. Jamaica. Included in Oligocene. Includes Cobre, Moneague, and Montpelier formations.

Ocheesee beds, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, p. 105. 1892.
Tertiary. Florida. Included in Miocene, Chattahoochee group.

Ocheesee beds, Dall. Wagner Free Inst. Sci., Trans., vol. iii, pt. ii, p. 209. 1892.
Miocene. Florida. Included in Chipola epoch, Chattahoochee group. Part. syn. Chattahoochee group.

Ocoee conglomerate and slates, Safford. Geol. Reconn. of the State of Tenn., 1st Rept., pp. 151–152. 1856.
Tennessee. Included in Metamorphic Rocks.

Ocoee conglomerate and slates, Safford. Geol. of Tenn., by Safford, pp. 183–198. 1869.
Silurian. Tennessee. Included in Potsdam group.

Ocoee group, Killebrew and Safford. Resources of Tennessee, pp. 28–29. 1874.
Silurian. Tennessee. Included in Potsdam period.

Ocoee group, Bradley. Am. Jour. Sci., 3d ser., vol. ix, p. 283. 1875.
Cambrian. Tennessee. Exact syn. Lower Potsdam (Acadian).

Ocoee, Little. Hand-book of Ga., Com. of Agric., 1876, p. 41. 1876.
Silurian. Georgia. Included in Lower Primordial. Part. syn. Acadian.

Ocoee conglomerate, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 143, 252, 299. 1891.
Cambrian. Appalachian region.

Ocoee, Spencer. Ga. Geol. Surv., The Paleozoic Group, p. 34. 1893.
Cambrian. Georgia. Included in Lower Cambrian(?).

Ocoee series, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 20. 1895.
Algonkian(?). Tennessee. Includes Wilhite slate, Citico conglomerate, Pigeo slate, and Thunderhead conglomerate and slate.

Ocoee group, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folios Nos. 16, 25. 1895, 1896.
Algonkian(?). Tennessee, North Carolina. Includes Wilhite slate, Citico conglomerate, Pigeon slate, Cades conglomerate, Thunderhead conglomerate, Hazel slate, and Clingman conglomerate.

Ocoee, Smith. Ala. Geol. Surv., Bull. No. 5, p. 110. 1896.
Algonkian. Alabama. Exact syn. Talladega.

Ocoya Creek, Turner. Am. Geol., vol. xiii, p. 239. 1894.
Tertiary. California. Included in Miocene.

Ocoya Creek beds, Turner. U. S. Geol. Surv., 14th Ann. Rept., pt. ii, p. 461. 1894.
Tertiary. California. Included in Miocene.

Odanah series, Tyrrell. Can. Geol. Surv., new ser., vol. v, pt. i, pp. 83E, 84E, 85E, 199 E, 212E–215E. 1893.
Cretaceous. British Columbia. Included in Pierre.

Ogallala formation, Darton. U. S. Geol. Surv., 19th Ann. Rept., pt. iv, pp. 734–735, 741–742. 1899.
Tertiary. Nebraska. Included in Pliocene(?).

Ogden quartzite, King. Am. Jour. Sci., 3d ser., vol. xi, p. 478. 1876.
Devonian. Nevada.

Ogden quartzite, Emmons. U. S. Geol. Expl. of 40th Parallel, vol. ii, p. 343, et seq. 1877.
Devonian. Utah.

Ogden quartzite, Hague. U. S. Geol. Expl. of 40th Parallel, vol. ii, p. 400. 1877.
Devonian. Utah.

Ogden quartzite, King. U. S. Geol. Expl. of 40th Parallel, vol. i, pp. 127–248. 1878.
Devonian. Utah, Nevada.

Ogden flint, Prosser. Geol. Soc. Am., Bull., vol. vi, p. 48. 1894.
Carboniferous, Permian. Kansas.

Ogishke conglomerate, Winchell. Minn. Geol. and Nat. Hist. Surv., 16th Ann. Rept., pp. 344–350, 359. 1888.
Minnesota.

Ogishke conglomerate, Winchell. Am. Assoc. Adv. Sci., Proc., vol. xxxviii, p. 234. 1889.
Algonkian. Lake Superior region. Included in Vermilion series.

Ogishke conglomerate, Grant. Am. Geol., vol. x, p. 4. 1892.
Archean. Minnesota.

Ohio black slate, Andrews. Ohio Geol. Surv., Rept. Prog., 1869, p. 62. 1870.
Ohio.

Ohio shale, Shaler. Ky. Geol. Surv., new ser., vol. iii, pp. 169–175. 1877.
Devonian. Kentucky. Exact syns. Huron shale. Includes all from top of Oriskany to top of Chemung.

Ohio shale, Orton. Rev. of Strat. Geol. of eastern Ohio, p. 4. 1880.
Devonian. Ohio. Exact syn. Black shale.

Ohio shale, Orton. Ohio Geol. Surv., vol. vi, pp. 4, 23. 1888.
Carboniferous. Ohio. Includes Cleveland shale, Erie shale, and Huron shale.

Ohio shale, Herrick. Denison Univ. Sci. Lab., Bull., vol. iii, p. 26. 1888.
Devonian. Ohio.

Ohio shale, Orton. U. S. Geol. Surv., 8th Ann. Rept., pt. ii, p. 570. 1889.
Devonian. Ohio, Indiana. Includes Cleveland, Huron, and Erie shales.

Ohio shale, Orton. Ohio Geol. Surv., Prelim. Rept. Petroleum and Inflammable Gas, pp. 23, 62. 1886.
Ohio.

Ohio shale, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 27–33, pp. 248–249. 1890.
Devonian. Ohio. Includes Cleveland shale, Erie shale, and Huron shale. Part. syn. Genesee slate, Portage and Chemung groups.

Ohio shale, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 21. 1893.
Devonian. Ohio. Includes Cleveland shale, Erie shale, and Huron shale.

Ohio, Eldridge. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 9. 1894.
Cretaceous. Colorado.

Ohio Creek, Cross. U. S. Geol. Surv., Mon., vol. xxvii, p. 219. 1896.
Cretaceous. Colorado. Part. syns. Arapahoe.

Ohio shale, Bownocker. Denison Univ. Sci. Lab., Bull., vol. ii, art. ii, p. 14. 1898.
Ohio.

Oil Creek Lake group, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1767. 1895.
Carboniferous. Pennsylvania. Included in No. 10, Pocono. Includes Corry sandstone, 3d Mountain sandstone, Cussewago shale, limestone, and sandstone. Exact syn. Berea group of Ohio.

Oil Lake group, White. 2d Pa. Geol. Surv., Rept. Q^4, pp. 91–98. 1881.
Carboniferous. Pennsylvania. Includes Corry and Cussewago sandstone and shales. Exact syns. Berea grit, Pithole grit. Part. syn. Pocono.

Oklune series, Spurr. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 163–169, 181. 1900.
Cretaceous. Alaska.

Old Red sandstone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 278–283. 1843.
Paleozoic. New York. Includes Catskill group, Montrose and Oneonta sandstone, No. 11, Pennsylvania Survey.

Old Red sandstone, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 97–102. 1875.
Devonian. Pennsylvania and New York. Exact syn. No. IX.

Olean conglomerate, Sub-, Carll. 2d Pa. Geol. Surv., Rept. I^4, pp. 189–195. 1883.
Carboniferous. Pennsylvania. Exact syn. Shenango sandstone.

Olean conglomerate, Ashburner. 2d Pa. Geol. Surv., Rept. R^2, pp. 396–397. 1885.
Carboniferous. Pennsylvania.

Olean conglomerate, Sub-, Ashburner. 2d Pa. Geol. Surv., Rept. R^2, p. 402. 1885.
Carboniferous. Pennsylvania.

Olean Conglomerate, Sub-, Carll. 2d Pa. Geol. Surv., Rept. I^5, pp. 105–110. 1890.
Carboniferous, Pennsylvania. Included in Pocono. Exact syns. Shenango sandstone and Logan sandstone.

Olean conglomerate, Randall. Regents Univ. of N. Y., 47th Ann. Rept., p. 715. 1894.
New York.

Oleon, Sub-, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1733 et seq. 1895.
Carboniferous. Pennsylvania. Included in No. 10, Pocono.

Olean conglomerate, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1861, 1873, 1892. 1895.
Carboniferous. Pennsylvania. Included in No. 12, Pottsville conglomerate.

Olentangy shale, Winchell. Ohio Geol. Surv., vol. ii, pp. 243, 287. 1874.
Devonian. Ohio.

Olentangy shale, Orton. Ohio Geol. Surv., vol. vi, pp. 4, 22. 1888.
Devonian. Exact syn. Hamilton shale (?).

Olentangy shale, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 26–27. 1890.
Devonian. Ohio. Exact syn. Hamilton shale.

Olentangy shale, Orton. Ohio Geol. Surv., vol. vii, pp. 4, 20. 1893.
Devonian. Ohio. Exact syn. Hamilton shale.

Oley Valley slate, D'Invilliers. 2d Pa. Geol. Surv., Rept. D^3, pt. ii, pp. 102–103. 1883.
Cambrian (?). Pennsylvania. Included in Potsdam (?).

Olive shale, Read. Ohio Geol. Surv., vol. iii, pp. 337, 523. 1878.
Carboniferous. Ohio. Included in Waverly.

Oneida conglomerate, Vanuxem. Geol. of N. Y., pt. iii, pp. 71–74. 1842.
Paleozoic. New York. Included in New York system. Includes Shawangunk conglomerate, Millstone grit, Gray band of Rochester, and No. 5, Pennsylvania Survey.

Oneida conglomerate, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 31. 1843.
Paleozoic. New York. Included in New York system. Exact syn. Shawangunk conglomerate.

Oneida conglomerate, Emmons. Agric. of N. Y., vol. i, pp. 125–126. 1846.
Silurian. New York. Included in Champlain division of New York system.

Oneida conglomerate, Jewett. Am. Jour. Sci., 2d ser., vol. xxxviii, p. 121. 1864.
Silurian. New York.

Oneida conglomerate, Cook. Geol. of N. J., pp. 146–149. 1868.
Silurian. New Jersey. Exact syn. Shawangunk conglomerate or grit.

Oneida conglomerate, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 61. 1873.
Silurian. Ohio.

Oneida, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 532, 558. 1877.
Silurian. Appalachian region. Part. syn. Levant in part.

Oneida, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 44–48. 1881.
Silurian. Pennsylvania. Included in No. 4.

Oneida conglomerate, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, p. 288. 1881.
Silurian. Included in Medina group.

Oneida conglomerate, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 150–152. 1882.
Silurian. Pennsylvania. Included in No. 4, Medina.

Oneida, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 143–147. 1885.
Silurian. Pennsylvania.

Oneida conglomerate, White. N. Y. State Mus., 51st Ann. Rept., vol. i, p. r36. 1899.
Ordovician. New York.

Oneonta sandstone, Hall. N. Y. State Geol., Rept. for 1885, p. 11. 1886.
Devonian. New York.

Oneonta sandstone, Prosser. Geol. Soc. Am., Bull., vol. iv, pp. 93, 108. 1893.
Devonian. New York. Included in Portage.

Oneonta, Prosser. Am. Jour. Sci., 3d ser., vol. xlvi, pp. 213–215. 1893.
Devonian. New York.

Oneonta formation, Darton. Am. Jour. Sci., 3d ser., vol. xlv, pp. 203–209. 1893.
Devonian. New York.

Oneonta, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 238–240. 1894.
Devonian. New York.

Oneonta, Clarke. N. Y. State Geol., 13th Ann. Rept., p. 557. 1894.
Devonian. New York. Exact syn. Portage.

Oneonta sandstones, Clarke. N. Y. State Geol., 15th Ann. Rept., pp. 27–82. 1897.
Devonian. New York.

Oneota limestone, McGee. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 331. 1891.
Silurian. Iowa.

Oneota limestone, Hall. Geol. Soc. Am., Bull., vol. iii, p. 464. 1892.
Ordovician. Minnesota. Exact syn. Lower Magnesian.

Oneota, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, p. 341. 1892.
Ordovician (?). Minnesota. Included in Magnesian series.

Oneota, Keyes. Iowa Geol. Surv., vol. i, pp. 21–24. 1893.
Silurian. Iowa. Included in Lower Silurian. Exact syn. Lower Magnesian limestone.

Oneota, Hall and Sardeson. Geol. Soc. Am., Bull., vol. vi, pp. 167, 176. 1895.
Upper Cambrian. Minnesota. Included in Magnesian series.

Oneota limestone, Norton. Iowa Geol. Surv., vol. iii, pp. 182–184. 1895.
Silurian. Iowa.

Oneota limestone, Calvin. Iowa Geol. Surv., vol. iv, pp. 61–68. 1895.
Silurian. Iowa. Included in Ordovician. Exact syns. Lower Magnesian limestone, Calciferous.

Onondaga group, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 290–293, 304. 1839.
Silurian. New York.

Onondaga limestone, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 309–310. 1839.
Devonian. New York. Exact syn. Gray crinoidal limestone.

Onondaga salt group, Vanuxem. N. Y. Geol. Surv., 4th Ann. Rept., pp. 375–376. 1840.
Silurian. New York.

Onondaga limestone, Hall. N. Y. Geol. Surv., 4th Ann. Rept., pp. 418–420, 427. 1840.
Devonian. New York.

Onondaga limestone, Hall. N. Y. Geol. Surv., 5th Ann. Rept., pp. 156–158. 1841.
New York.

Onondaga salt group, Mather. N. Y. Geol. Surv., 5th Ann. Rept., pp. 89–90. 1841.
Silurian. New York.

Onondaga salt group, Hall. Am. Jour. Sci., 1st ser., vol. xlii, p. 58. 1842.
New York.

Onondaga system, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, pp. 233–234. 1842.
Includes Upper Silurian.

Onondaga limestone, Vanuxem. Geol. of N. Y., pt. iii, pp. 132–138. 1842.
Paleozoic. New York. Included in New York system. Includes Gray sparry limestone.

Onondaga salt group, Vanuxem. Geol. of N. Y., pt. iii, pp. 94–110. 1842.
Paleozoic. New York. Included in New York system. Includes Calciferous slate, Second graywacke with shell lime rock of Eaton.

Onondaga salt group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 117–140. 1843.
Paleozoic. New York. Included in New York system. Includes Calciferous slate, Second graywacke with shell lime rock of Eaton. Gypseous marls and slates.

Onondaga limestone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 151–157. 1843.
Paleozoic. New York. Included in New York system. Corniferous lime rock. Includes Gray sparry limestone.

Onondaga limestone, Mather. Geol. of N. Y., pt. i, p. 339. 1843.
Paleozoic. New York. Included in Helderberg division.

Onondaga salt group, Owen. Am. Jour. Sci., 2d ser., vol. i, pp. 43, 57. 1846.
Silurian. New York. Included in Helderberg series (or division) of the New York system. Includes Magnesian deposits and Vermicular lime rock.

Onondaga salt group, Emmons. Agric. of N. Y., vol. i, pp. 153–166. 1846.
New York. Included in Helderberg division of New York system. Includes Manlius water-lime group.

Onondaga limestone, Emmons. Agric. of N. Y., vol. i, pp. 174–179. 1846.
New York. Included in Helderberg division of New York system. Includes Selenurus limerock, Seneca limestone, and Corniferous limestone.

Onondaga salt group, Hall. Pal. of New York, vol. ii, p. 339. 1852.
Silurian. New York.

Onondaga limestone, Meek. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, p. 103. 1855.
Devonian. Missouri.

Onondaga limestone, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., pp. 107, 178, 196. 1855.
Devonian. Missouri.

Onondaga salt group, Hall. Iowa Geol. Surv., vol. i, pt. i, pp. 76–80. 1858.
Silurian. Iowa.

Onondaga salt group, Hall and Whitney. Am. Jour. Sci., 2d ser., vol. xxvii, p. 112. 1859.
Silurian. Iowa.

Onondaga formation, Logan. Can. Geol. Surv., Rept. 1843–63, pp. 345–352. 1863.
Upper Silurian. Canada.

Onondaga formation, Chapman. Can. Inst., new ser., vol. viii, pp. 437–439. 1863.
Silurian. Canada. Included in Upper Silurian.

Onondaga group, Worthen. Ill. Geol. Surv., vol. iii, pp. 23–24, 39–40, 62–63. 1868.
Devonian. Illinois.

Onondaga limestone, Cook. Geol. of N. J., pp. 165–166. 1868.
Devonian. New Jersey.

Onondaga, Winchell. Am. Assoc. Adv. Sci., Proc., vol. xxii, p. 103. 1873.
Devonian. Ohio.

Onondaga, Winchell. Ohio Geol. Surv., vol. ii, p. 340. 1874.
Devonian. Ohio. Included in Corniferous.

Onondaga limestone, Broadhead. Mo. Geol. Surv., Rept. 1873–1874, p. 27. 1874.
Devonian. Missouri.

Onondaga, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 530, 555. 1877.
Silurian. Appalachian region. Exact syns. Salina and Scalent.

Onondaga salt group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, pp. 290, 291. 1881.
Silurian.

Onondaga group, Englemann and Worthen. Econ. Geol. of Ill., vol. i, pp. 461–462. 1882.
Silurian (?). Illinois.

Onondaga salt, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxxi, p. 47. 1883.
Silurian. Eastern United States.

Onondaga, Claypole. Am. Phil. Soc., Proc., vol. xxi, p. 497. 1884.
Silurian. Pennsylvania. Exact syn. Gypseous group.

Onondaga, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 128–131. 1885.
Silurian. Pennsylvania. Exact syn. Salina.

Onondaga, Claypole. 2d Pa. Geol. Surv., Rept. F^2, pp. 52–58. 1885.
Silurian. Pennsylvania. Includes Bridgeport sandstone.

Onondaga group, Miller. N. A. Geol. and Pal., p. 54. 1889.

Onondaga salt group, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 52. 1890.
Silurian. Arkansas. Part. syn. Salina.

Onondaga limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, pp. 52, 53. 1890.
Devonian. Arkansas.

Onondaga salt group, Prosser. Roch. Acad. Sci., Proc., vol. ii, pp. 50–124. 1892.
Silurian. New York.

Onondaga limestone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, p. 1143 et seq. 1892.
Devonian. Pennsylvania. Included in No. 8a.

Onondaga, Brumell. Geol. Soc. Am., Bull., vol. iv, pp. 227, 230. 1893.
Silurian. Ontario.

Onondaga salt group, Prosser. Geol. Soc. Am., Bull., vol. iv, pp. 97, 108, 116. 1893.
Upper Silurian. New York.

Onondaga limestone, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 203, 207–208, 242–243, 301. 1894.
Devonian. New York. Exact syn. Corniferous.

Onondaga limestone, Ries. N. Y. State Geol., 15th Ann. Rept., p. 403. 1897.
Devonian. New York. Exact syn. Corniferous.

Onondaga limestone, Luther. N. Y. State Geol., 16th Ann. Rept., p. 214. 1899.
Devonian. New York.

Onondaga limestone, Weller. N. J. Geol. Surv., Rept., 1899, p. 45. 1900.
Devonian. New Jersey.

Ontario division, Mather. Geol. of N. Y., pt. i, pp. 353–365. 1843.
Paleozoic. New York. Included in Shawangunk grit.

Ontario division, Emmons. Agric. of N. Y., vol. i, pp. 141–152. 1846.
New York. Includes Medina sandstone, Clinton group, and Niagara group.

Ontario group, Chapman. Can. Inst., new ser., vol. viii, p. 186. 1863.
Silurian. Canada. Included in Lower Siluraina. Includes Birdseye and Black River formation, Trenton, Utica, and Hudson River.

Ontario group, Chapman. A Popular and Practical Exposition of the Minerals and Geology of Canada, p. 157, Toronto. 1864.
Silurian. Canada. Includes Hudson River, Utica, Trenton, Birdseye, and Black River.

Ontarian system, Lawson. Geol. Soc. Am., Bull., vol. i, p. 177. 1889.
Archean. Ontario.

Ontarian, Dana. Geol. Soc. Am., Bull., vol. i, p. 41. 1889.
Upper Silurian. New York, etc. Exact syn. Ontario division of Mather.

Ontarian, Winchell and Grant. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. iv, p. 195. 1899.
Minnesota. Includes Coutchiching and Keewatin.

Ontaric, Clarke and Schuchert. Science, new ser., vol. x, p. 876. 1899.
Silurian. New York. Exact syn. Siluric.

Oostanala series, Spencer. Ga. Geol. Surv., The Paleozoic Group, pp. 34, 37, 77, 87, 99, 108, 112, 115, 119, 123, 130. 1893.
Cambrian. Georgia. Included in Middle and Upper Cambrian. Includes Knox or Connesauga shale, and Knox or Rome sandstone.

Ophian, Witney and Wadsworth. Harvard Mus. Comp. Zool., Bull., vol. vii, 1880–84, p. 562. 1884.
Included in Azoic system.

Orange Martin limestone, Owen. Geol. Reconn. Indiana, Rept. 1859–60, p. 126. 1862.
Carboniferous. Indiana. Included Eocarboniferous limestone.

Orange Sand group, Safford. Geol. Reconn. of the State of Tenn., 1st Rept., p. 162. 1856.
Cretaceous. Tennessee.

Orange Sand group, Harper. Prelim. Rept. Geol. and Agric. Miss., p. 107. 1857.
Mississippi. Included in rocks overlying the Cretaceous formation.

Orange Sand formation, Hilgard. Rept. on Geol. and Agric., Miss., pp. 4–46. 1860.
Quaternary. Mississippi.

Orange Sand, Safford. Am. Jour. Sci., 2d ser., vol. xxxvii, p. 369. 1864.
Tertiary. Tennessee. Exact syn. La Grange group.

Orange Sand, Hilgard. Am. Jour. Sci., 2d ser., vol. xli, pp. 311–318; vol. xlii, p. 346. 1866.
Quaternary. Mississippi.

Orange Sand or La Grange group, Safford. Geol. of Tenn., pp. 424–428. 1869.
Tertiary. Tennessee.

Orange Sand formation, Hilgard. Am. Jour. Sci., 2d ser., vol. xlviii, p. 334. 1869.
Quaternary. Louisiana.

Orange Sand, Hilgard. Am. Jour. Sci., 2d ser., vol. xlvii, pp. 77–88. 1869.
Quaternary (?). Louisiana.

Orange Sand, Hilgard. Am. Jour. Sci., 3d ser., vol. ii, pp. 398–401. 1871.
Pleistocene. Mississippi Valley and Gulf region.

Orange Sand, Killebrew and Safford. Resources of Tenn., p. 45. 1874.
Quaternary. Tennessee.

Orange Sand, Hilgard. Smithsonian Inst. Contr., vol. xxiii, no. 2, p. 3. 1881.
Tertiary. Louisiana.

Orange Sand, Salisbury. Am. Jour. Sci., 3d ser., vol. xlii, pp. 252–253. 1891.
Tertiary. Illinois.

Orange Sands, Chamberlin and Salisbury. Am. Jour. Sci., 3d ser., vol. xli, pp. 364–377. 1891.
Pre-Pleistocene. Mississippi Valley.

Orange Sand, Dall. Wagner Free Inst. Sci., Trans., vol. iii, pt. ii, p. 209. 1892.
Pliocene. Gulf and Atlantic States. Included in Floridian epoch, Lafayette group. Part syn. Lafayette group.

Orangeburg formation, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 344. 1898.
Tertiary. Georgia, Alabama. Included in Claibornian stage, Eocene.

Orangeville shale, White. 2d Pa. Geol. Surv., Rept. Q^4, pp. 89–90. 1881.
Carboniferous. Pennsylvania. Included in Meadville group.

Orangeville shale, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, p. 1765. 1895.
Carboniferous. Pennsylvania. Included in No. 10, Pocono.

Orbitoides limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 57. 1890.
Tertiary. Arkansas.

Orbitoides limestone, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, p. 101. 1892.
Tertiary. Florida. Included in Vicksburg group.

Orbitoitic, Heilprin. Phil. Acad. Nat. Sci., Proc., 1882, pp. 183–184. 1882.
Oligocene. Exact syn. Vicksburg beds, Florida beds.

Orbitoitic, Heilprin. Phil. Acad. Nat. Sci., Jour., vol. ix, pp. 117–120. 1884.
Tertiary. Included in Oligocene. Exact syns. Vicksburg beds and Florida Nummulitic beds.

Orbitolite limestone, Lyell. Am. Jour. Sci., 2d ser., vol. iv, pp. 186–191. 1847.
Eocene. Alabama. Exact syn. Nummulite limestone.

Orca series, Schrader. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, p. 404. 1900.
Upper Cretaceous or Tertiary. Alaska.

Orchard gneiss, Kemp. Am. Inst. Mg. Engrs., Trans., vol. xxvii, p. 178. 1898.
Archean. New York.

Oread limestone, Haworth. Kan. Univ. Quart., vol., ii, pp. 123–124. 1894.
Carboniferous. Kansas.

Oread limestone, Haworth. Am. Jour. Sci., 3d ser., vol. l, p. 461. 1895.
Carboniferous. Kansas. Included in Coal Measures.

Oread limestone, Haworth. Kan. Univ. Geol. Surv., vol. i, pp. 138, 161, 166. 1896.
Carboniferous. Kansas.

Oread limestone, Bennett. Kan. Univ. Geol. Surv., vol. i, pp. 60, 71, 114–116. 1896.
Carboniferous. Kansas. Includes the heavy limestone at Atchison.

Oread limestone, Haworth. Kan. Univ. Geol. Surv., vol. iii, pp. 62–64, 93, 94, 104. 1898.
Carboniferous. Kansas. Included in Douglas formation.

Oreodon, Wortman. Am. Mus. Nat. Hist., Bull., vol. v, p. 97. 1893.
Tertiary. Included in White River or Lower Miocene.

Oriskany sandstone, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 308–309. 1839.
Devonian. New York.

Oriskany, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, pp. 232–233. 1842.
Middle Silurian. New York.

Oriskany sandstone, Vanuxem. Geol. of N. Y., pt. iii, pp. 123–127. 1842.
Paleozoic. New York. Includes White sandstone. Exact syn. No. 7, Pennsylvania Survey.

Oriskany sandstone, Mather. Geol. of N. Y., pt. i, pp. 342–343. 1843.
Paleozoic. New York. Included in Helderberg division.

Oriskany sandstone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 146–148. 1843.
Paleozoic. New York. Included in New York system. Includes No. 7, Pennsylvania Survey.

Oriskany sandstone, Emmons. Agric. of N. Y., vol. i, pp. 168–171. 1846.
New York. Included in Helderberg division of New York system.

Oriskany sandstone, Hall. Pal. of N. Y., vol. ii, pt. i, pp. 421–425. 1859.
Devonian. New York.

Oriskany sandstone, Hitchcock. Prelim. Rept. Geol. of Maine, vol. i, pp. 243–245. 1861.
Devonian. Maine.

Oriskany formation, Logan. Can. Geol. Surv., Rept. 1843–63, pp. 359–361. 1863.
Devonian. Canada. Included in Upper Helderberg group.

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Carboniferous. Kansas.

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Carboniferous. Kansas.

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Cambrian. Missouri, Arkansas.

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Carboniferous. Arkansas. Included in Sebastian stage.

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Devonian. Pennsylvania and New York.

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Trinidad.

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Canada. Included in Laramie. Includes Porcupine Hills series, Willow Creek series, and greater part of St. Marys River series of Dawson.

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Tertiary. Maryland.

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Arkansas.

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Carboniferous. Pennsylvania. Includes New River coal series. Exact syn. Vespertine.

Pocono sandstone, Platt. 2d Pa. Geol. Surv., Rept. H^2, p. xxiv–xxvi 1877.

Pocono, Ashburner. 2d Pa. Geol. Surv., Rept. F, pp. 206–216. 1878.
Carboniferous. Pennsylvania. Exact syn. Vespertine.

Pocono, Stevenson. 2d Pa. Geol. Surv., Rept. K^3, pp. 54–57. 1878.
Carboniferous. Pennsylvania. Exact syn. Vespertine.

Pocono, Ashburner. 2d. Pa. Geol. Surv., Rept. R, pp. 64–71. 1880.
Carboniferous. Pennsylvania. Includes Sub-Olean conglomerate, Marvin Creek limestone. Exact syn. No. 10, Vespertine.

Pocono, Chance. 2d Pa. Geol. Surv., Rept. G^4, pp. 97–101. 1880.
Carboniferous. Pennsylvania. Exact syn. No. 10, Vespertine.

Pocono, White. 2d Pa. Geol. Surv., Rept. G^5, pp. 56–59. 1881.
Carboniferous. Pennsylvania. Includes Griswold Gap conglomerate, Mount Pleasant conglomerate. Exact syn. No. 10.

Pocono, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 22–26. 1881.
Carboniferous. Pennsylvania. Exact syn. No. 10.

Pocono, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 89–91. 1882.
Carboniferous. Pennsylvania. Includes Mount Pleasant conglomerate.

Pocono, Stevenson. 2d Pa. Geol. Surv., Rept. T^2, pp. 69–72. 1882.
Carboniferous. Pennsylvania.

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Carboniferous. Pennsylvania. Exact syn. No. 10.

Pocono, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 77–88. 1885.
Carboniferous. Pennsylvania.

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Carboniferous. Pennsylvania. Exact syn. No. 10.

Pocono sandstone, Winslow. 2d Pa. Geol. Surv., Ann. Rept., 1886, pt. iv, pp. 1337, 1343, 1353, 1355, 1357, 1361, 1363. 1887.
Carboniferous. Pennsylvania. Exact syn. No. 10.

Pocono, Darton. Am. Geol., vol. x, p. 18. 1892.
Carboniferous. Virginia. Part. syn. Montgomery grits of Rogers.

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Carboniferous. New York, Pennsylvania. Included in Lower Carboniferous. Includes Mount Pleasant conglomerate.

Pocono, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1629–1789. 1895.
Carboniferous. Pennsylvania. Exact syn. No. x, Pennsylvania Survey.

Pocono sandstone, Darton. U. S. Geol. Surv., Geol. Atlas of U. S., Folios No. 14, 32. 1894, 1896.
Carboniferous. Virginia, West Virginia. Exact syns. Montgomery grits, Rogers' No. x and Vespertine.

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Carboniferous. West Virginia.

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Carboniferous. West Virginia and Maryland.

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Carboniferous. Maryland.

Pocono, Clark. Md. Geol. Surv., vol. ii, pp. 199, 208. 1898.
Carboniferous. Maryland.

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Carboniferous. West Virginia.

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Carboniferous. Virginia and West Virginia.

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Carboniferous. Maryland.

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Silurian-Cambrian. Nevada.

Pogonip limestone, King. U. S. Expl. of 40th Parallel, vol. i, pp. 127–248. 1878.
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Silurian. Nevada.

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Michigan.

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Cretaceous. Wyoming. Included in Laramie.

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Silurian. Ohio.

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Cambrian. Canada. Exact syn. Phillipsburg group.

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Tertiary. Colorado. Included in Huerfano series, Lower Eocene.

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Cretaceous. Colorado.

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Tertiary. Colorado. Included in Eocene(?).

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Minnesota. Exact syn. Pewabic.

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Minnesota. Included in Animikie.

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Silurian. Arkansas. Included in Ordovician.

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Arkansas.

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Carboniferous. Ohio.

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Carboniferous. Rhode Island.

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Devonian. Pennsylvania. Exact syn. Catskill.

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Pennsylvania.

Pope Hollow rock, Randall. Regents Univ. of N. Y., 47th Ann. Rept., p. 714. 1894.
New York.

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Canada. Included in Laramie.

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Canada. Included in Laramie.

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Included in Azoic system.

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Quaternary. Louisiana.

Port Hudson, Smith. Am. Assoc. Adv. Sci., Proc., vol. xx, p. 252. 1871.
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Pleistocene. Gulf region.

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Missouri.

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Pleistocene. Louisiana.

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Devonian. New York.

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Ohio. Exact syn. Waverly sandstone.

Portage group, Vanuxem. Geol. of N. Y., pt. iii, pp. 172–174. 1842.
Paleozoic. New York. Included in New York system. Includes Cashaqua shale, Gardeau group, and Sherburne flagstones and shale. Exact syn. Nunda group.

Portage sandstone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 228–230. 1843.
Paleozoic. New York. Included in Portage group.

Portage group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 224–241. 1843.
Paleozoic. New York. Included in New York system. Includes Sherburne flagstone and shale, Cashaqua shale, and Gardeau group. Exact syn. Nunda group. Part syn. No. ix, Pennsylvania Survey.

Portage group, Emmons. Agric. of N. Y., vol. i, pp. 188–190. 1846.
Devonian. New York. Included in Catskill division of N. Y. system.

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Devonian. Ohio.

Portage and Chemung group, Logan. Can. Geol. Surv., Rept. 1843–63, pp. 387–389. 1863.
Devonian. Canada. Included in Upper Devonian. Includes Portage and Chemung of N. Y.

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Devonian. Canada.

Portage group, Dawson. Am. Jour. Sci., 2d ser., vol. xxxv, pp. 314–319. 1863.
Devonian. Canada.

Portage, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 69. 1873.
Devonian. Ohio.

Portage, Lesley. 2d Pa. Geol. Surv., Rept. I, pp. 82–87. 1875.
Devonian. Pennsylvania, New York. Exact syn. No. viii.

Portage, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 527, 549. 1877.
Devonian. Appalachian region. Exact syn. Vergent.

Portage flags, White. 2d Pa. Geol. Surv., Rept. Q^4, pp. 119–120. 1881.
Devonian. Pennsylvania.

Portage flags, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 29–30. 1881.
Devonian. Pennsylvania.

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Devonian. Pennsylvania.

Portage, Williams. U. S. Geol. Surv., Bull. No. 41, p. 31. 1887.
Devonian. New York.

Portage group, Miller. N. A. Geol. and Pal., p. 62. 1889.

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Devonian. New York.

Portage, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1337–1370. 1892.
Devonian. Pennsylvania. Includes Cashaqua and Gardeau shales. Exact syn. No. viiif.

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Devonian. Ontario.

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Devonian. New York.

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Devonian. New York.

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Devonian. New York.

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Devonian. New York.

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Devonian. New York.

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Devonian. New York.

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Devonian. New York.

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Devonian. New York.

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Michigan.

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Devonian. New York.

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Devonian. New York.

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Tertiary(?). Tennessee. Part. syn. Northern Lignitic.

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Tertiary. Tennessee. Part syn. Northern lignite.

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Tertiary. Tennessee. Included in Eocene. Exact syn. Flatwoods of Mississippi.

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Pliocene.

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Pre-Carboniferous. New Brunswick.

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Archean. Wisconsin.

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Carboniferous. Indiana.

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Pleistocene or Pliocene. Jamaica. Included in Coastal series.

Post-medidial series, Rogers. Am. Jour. Sci., 1st ser., vol. xlvii, p. 155. 1844.
Devonian. Includes Marcellus shales, Hamilton group, Tully limestone, Genesee shale, Portage group, and Chemung group.

Post-Meridian series, Rogers. Geol. of Pa., vol. i, pp. 107, 273, et seq., vol. ii, p. 755. 1858.
Silurian. Pennsylvania. Includes Cauda-galli and Schoharie grits, and Upper Helderberg or Corniferous. Cliff limestone in part.

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Carboniferous. Arkansas.

Poteau group, Drake. Am. Phil. Soc., Proc., vol. xxxvi, p. 378. 1897.
Carboniferous. Indian Territory. Included in Upper Coal Measures.

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Cretaceous. Maryland.

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Cretaceous. Atlantic Coastal region.

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Jurassic(?). Atlantic Coastal Plain.

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Cretaceous. Atlantic Coastal Plain.

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Mesozoic. Virginia, Maryland.

Potomac, White. U. S. Geol. Surv., Bull. No. 82, pp. 89, 251. 1891.
Cretaceous. Atlantic coast.

Potomac, McGee. Smithsonian Inst., Rept. 1890, p. 73. 1891.
Cretaceous. District of Columbia.

Potomac, Darton. U. S. Geol. Surv., Baltimore, Md., Geologic sheet. 1892.
Cretaceous. Maryland.

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Cretaceous. Maryland.

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Cretaceous. Maryland, District of Columbia, and Virginia.

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Cretaceous. Maryland. Included in Lower Cretaceous.

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Cretaceous. Virginia and Maryland.

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Cretaceous. Atlantic Coastal Plains. Includes James River series, Rappahannock, Mount Vernon, Aquia Creek, Iron ore, and Albirupean series.

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Mesozoic. Maryland.

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Cretaceous. Atlantic Coastal Plain.

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Cretaceous. Atlantic Coastal Plain.

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Juratrias, Cretaceous. Atlantic Coastal Plain.

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Cretaceous. Atlantic Coastal Plain, Texas.

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Cretaceous. Virginia. Exact syn. Neocomian.

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Cretaceous. Atlantic Coastal Plain.

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Maryland. Part. syn. Alantosaurus.

Potomac group, Clark. Md. Geol. Surv., vol. i, p. 156. 1897.
Cretaceous, Jurassic(?). Maryland. Includes Raritan, Patapsco, Arundel, and Patuxent.

Potomac formation, Stanton. Jour. of Geol., vol. v, pp. 587–592. 1897.
Cretaceous. Included in Lower Cretaceous.

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Triassic. Arkansas.

Potomac marble, Clark. Md. Geol. Surv., vol. ii, p. 171. 1898.
Triassic. Maryland. Included in Red beds, Newark formation. Exact syns. Potomac breccia, and Calico rock.

Potosi limestone, Keyes. Mo. Geol. Surv., vol. vi, p. 331. 1894.
Cambrian. Missouri. Included in St. François limestone, Ozark series. Part. syns. Jefferson City limestone and Moreau sandstone.

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Missouri.

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Tertiary. Colorado.

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Cambrian. New York.

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Cambrian. New York.

Potsdam, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, p. 230. 1842.
Lower Silurian.

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Paleozoic. New York. Included in New York Transition system, Champlain group.

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Paleozoic. New York. Included in New York system. Includes Potsdam and Keeseville sandstone, No. 1, Pennsylvania Survey.

Potsdam sandstone, Mather. Geol. of N. Y., pt. i, pp. 418–421. 1843.
Paleozoic. New York. Included in Champlain division.

Potsdam sandstone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 27. 1843.
Paleozoic. New York. Included in New York system. Exact syn. No. 1, Pennsylvania Survey.

Potsdam sandstone, Emmons. Agric. of N. Y., vol. i, pp. 117–118. 1846.
New York. Included in Champlain division of New York system.

Potsdam sandstone, Murray. Can. Geol. Surv., Rept. of Prog., pp. 1847–48. 1849.
Ontario.

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Lake Superior region.

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Silurian. Michigan.

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Cambrian. Iowa.

Potsdam sandstone, Whitney. Iowa Geol. Surv., vol. i, pt. i, pp. 328–331. 1858.
Cambrian, Iowa.

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Silurian. Texas.

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Vermont.

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Silurian. South Dakota.

Potsdam sandstone, Marcou. Boston. Soc. Nat. Hist., Proc., vol. viii, 1861–62, pp. 241–242. 1861.
Vermont and Canada. Included in Upper Taconic of Marcou.

Potsdam sandstone, Hitchcock. Geol. of Vt., vol. i, pp. 264–266. 1861.
Paleozoic. Vermont. Included in Potsdam period.

Potsdam sandstone, Whitney. Rept. on Upper Mississippi Lead region, p. 140. 1862.
Cambrian. Wisconsin. Exact syn. Lower sandstone.

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Silurian. Vermont.

Potsdam sandstone, Hayden. Am. Jour. Sci., 2d ser., vol. xxxiii, pp. 68–79. 1862.
Silurian. South Dakota.

Potsdam sandstone, Hayden. Am. Phil. Soc., Trans., new ser., vol. xii, pp. 36–38. 1863.
Cambrian. Black Hills. Included in Lower Silurian.

Potsdam, Hall. Regents Univ. of N. Y., 16th Ann. Rept., pp. 210–220. 1863.
Silurian. Lake Superior region, Mississippi Valley. Included in Lower Silurian. Includes Lower sandstone of Upper Mississippi Valley, Second sandstone, Third Magnesian limestone, Third sandstone, and Fourth Magnesian limestone of Missouri.

Potsdam group, Chapman. Can. Inst., new ser., vol. viii, pp. 186–190. 1863.
Cambrian. Canada. Included in Lower Silurian. Includes Beauharnois and Kaminstiquia formations.

Potsdam group, Logan. Can. Geol. Surv., Rept., 1843–63, pp. 87–109. 1863.
Cambrian. Canada. Included in Lower Silurian.

Potsdam sandstone, Winchell. Am. Jour. Sci., 2d ser., vol. xxxvii, pp. 226–232. 1864.
Silurian. Wisconsin.

Potsdam, Buckley. Prelim. Rept. on Geol. of Texas, pp. 16–22. 1866.
Cambrian. Texas.

Potsdam sandstone, Cook. Geol. of N. J., pp. 71–89. 1868.
Cambrian. New Jersey.

Potsdam sandstone, Perry. Am. Jour. Sci., 2d ser., vol. xlvii, p. 344. 1869.
Silurian. Vermont.

Potsdam group, Safford. Geol. of Tenn., by Safford, pp 182–226. 1869.
Silurian. Tennessee. Included in Lower Silurian. Includes Ocoee conglomerate and slates, Chilhowee sandstone, and Knox group.

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Cambrian. Iowa. Included in Primordial group of Lower Silurian.

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Cambrian. Canada. Included in Lower Silurian.

Potsdam sandstone, Brooks. Am. Jour. Sci., 3d ser., vol. iv, pp. 22–26. 1872.
Cambrian. New York.

Potsdam sandstone, Irving. Wis. Acad. Sci., Trans., vol. i–ii, 1870–72, pp. 129–137. 1872.
Wisconsin.

Potsdam sandstone, Eaton. Wis. Acad. Sci., Trans., vol. i–ii, 1870–72, p. 125. 1872.
Wisconsin.

Potsdam sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Ann. Rept., 1872, pp. 68–80. 1873.
Silurian. Minnesota.

Potsdam, Lower, Ford. Am. Jour. Sci., 3d ser., vol. vi, p. 134. 1873.
Cambrian. New York. Exact syn. Olenellus or Georgia slates of Vermont, Olenellus limestones, and Labrador.

Potsdam sandstone, Eaton. Am. Jour. Sci., 3d ser., vol. v, p. 446. 1873.
Cambrian. Wisconsin.

Potsdam, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 58, 112. 1873.
Silurian. Ohio.

Potsdam sandstone, Winchell. Rept. of a Reconn. of the Black Hills by Capt. Ludlow, pp. 63–64. 1875.
Cambrian. South Dakota.

Potsdam sandstone, Irving. Am. Jour. Sci., 3d ser., vol. ix, p. 441. 1875.
Cambrian. Wisconsin. Included in Primordial.

Potsdam sandstone, Fontaine. Am. Jour. Sci., 3d ser., vol. ix, pp. 367–368, 419–421, 424. 1875.
Cambrian. Virginia.

Potsdam, Prime. 2d Pa. Geol. Surv., Rept. D, pp. 5–7. 1875.
Cambrian. Pennsylvania. Exact syn. No. 1.

Potsdam, Hotchkiss. A Geogr. and Political Summary of Virginia, p. 22. 1876.
Cambrian and Lower Silurian. Virginia. Exact syns. Primal, Formation No. i, Rogers.

Potsdam, Smith. Ala. Geol. Surv., Rept., 1875, pp. 13, 132, 173. 1876.
Cambrian. Alabama.

Potsdam sandstone, Chamberlin. Geol. of Wis., vol. ii, pp. 257–267. 1877.
Lower Silurian. Wisconsin. Includes Madison sandstone and Mendota limestone.

Potsdam, Prime. Am. Phil. Soc., Proc., vol. xvi, p. 248. 1877.
Pennsylvania. Exact syn. No. 1.

Potsdam, Emmons. U. S. Geol. Expl. of 40th Parallel, vol. ii, p. 343 et seq. 1877.
Cambrian. Utah.

Potsdam sandstone, Prime. Am. Jour. Sci., 3d ser., vol. xv, p. 262. 1878.
Cambrian. Pennsylvania.

Potsdam, Prime. 2d Pa. Geol. Surv., Rept. D^2, pp. 7-10. 1878.
Cambrian. Pennsylvania. Exact syn. No. 1.

Potsdam, Endlich. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., pp. 70, 101, 118. 1879.
Silurian. Wyoming.

Potsdam sandstone, Wadsworth. Harvard Coll. Mus. Comp. Zool., Bull., vol. vii, 1880-1884, p. 60. 1880.

Potsdam sandstone, Newton. Geol. of Black Hills, pp. 80-107. 1880.
Cambrian. South Dakota.

Potsdam sandstone, Strong. Geol. of Wis., vol. iii, pp. 395-397. 1880.
Cambrian. Wisconsin. Includes Madison sandstone and Mendota limestone.

Potsdam sandstone, Whittlesey. Geol. of Wis., vol. iii, p. 220. 1880.
Cambrian. Wisconsin.

Potsdam, Hall. 2d Pa. Geol. Surv., Rept. C^6, pp. 38-46. 1881.
Cambrian. Pennsylvania. Exact syn. Rogers's Primal.

Potsdam group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. iv, p. 267. 1881.
Ordovician.

Potsdam, Platt. 2d Pa. Geol. Surv., Rept. T, p. 51. 1881.
Cambrian. Pennsylvania.

Potsdam sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 10th Ann. Rept., pp. 123-136. 1882.
Minnesota.

Potsdam sandstone, Wooster. Geol. of Wis., vol. iv, pp. 109-123. 1882.
Cambrian, Wisconsin.

Potsdam sandstone, Strong. Geol. of Wis., vol. iv, pp. 38-64. 1882.
Cambrian. Wisconsin.

Potsdam, Selwyn. Science, vol. i, p. 11. 1883.
Cambrian. Canada.

Potsdam, Lesley. 2d Pa. Geol. Surv., Rept. C^4, pp. 144-160. 1883.
Cambrian. Pennsylvania. Exact syn. Primal slate of Rogers.

Potsdam, D'Invilliers. 2d Pa. Geol. Surv., Rept. D^3, pt. ii, pp. 99-136. 1883.
Cambrian. Pennsylvania. Exact syn. No. 1.

Potsdam, Prime. 2d Pa. Geol. Surv., Rept. D^3, pt. i, pp. 205-214. 1883.
Cambrian. Pennsylvania. Exact syn. No. 1.

Potsdam, Chamberlin. Geol. of Wis., vol. i, p. 119. 1883.
Cambrian. Wisconsin.

Potsdam quartzite, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 537. 1884.
Minnesota.

Potsdam quartzite, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 572. 1884.
Minnesota.

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Cambrian. Virginia.

Potsdam group, Campbell. Am. Jour. Sci., 3d ser., vol. xxix, pp. 470-474. 1885.
Cambrian. Virginia.

Potsdam, Dwight. Am. Jour. Sci., 3d ser., vol. xxxi, pp. 125-132. 1886.
Cambrian. New York.

Potsdam, Dwight. Am. Assoc. Adv. Sci., Proc., vol. xxxiv, p. 204. 1886.
Cambrian. New York.

Potsdam sandstone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. 117, 157. 1888.
Cambrian. Minnesota.

Potsdamic, Hitchcock. Boston Soc. Nat. Hist., Proc., vol. xxiv, 1888–90, p. 37. 1888.

Potsdam group, Miller. N. A. Geol. and Pal., p. 29. 1889.

Potsdam, Winchell. Minn. Geol. and Nat. Hist. Surv., 17th Ann. Rept., pp. 49–56. 1889.
Minnesota.

Potsdam sandstone, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, p. 135. 1889.
Cambrian. Minnesota.

Potsdam, Walcott. U. S. Geol. Surv., Bull. No. 87, pp. 113, 180, 202, 214, 217, 244. 1891.
Cambrian. Lake Superior, Rocky Mts., Texas, Appalachian region. Included in Upper Cambrian.

Potsdam sandstone, McGee. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 333. 1891.
Cambrian. Iowa.

Potsdam sandstone, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, p. 335. 1892.
Cambrian. Minnesota. Included in Upper Cambrian.

Potsdam, Prosser. Geol. Soc. Am., Bull., vol. iv, pp. 108, 110. 1893.
Cambrian. New York.

Potsdam sandstone, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 410–417. 1894.
Cambrian. New York.

Potsdam sandstone, Cushing. N. Y. State Geol., 13th Ann. Rept., pp. 478–479. 1894.
Cambrian. New York.

Potsdam, Cushing. Geol. Soc. Am., Bull., vol. vi, p. 287. 1895.
Cambrian. New York.

Potsdam, Udden. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 839. 1896.
Cambrian. Illinois.

Potsdam sandstone, Cushing. N. Y. State Geol., 15th Ann. Rept., vol. i, p. 510. 1897.
Cambrian. New York.

Potsdam sandstone, Buckley. Wis. Geol. and Nat. Hist. Surv., Bull. No. 4, Econ. ser., No. ii, pp. 167–248. 1898.
Cambrian. Wisconsin.

Potsdam sandstone, Wadsworth. Am. Inst. Mg. Engrs., Trans., vol. xxvii, p. 683. 1898.
Cambrian. Lake Superior region.

Potsdam formation, Walcott. Geol. Soc. Am., Bull., vol. x, p. 225. 1899.
Cambrian. Wisconsin.

Potsdam sandstone, Salisbury and Atwood. Wis. Geol. and Nat. Hist. Surv., Bull. No. 5, Ed. ser., no. i, pp. 27–31. 1900.
Cambrian. Wisconsin.

Pottawatomie formation, Haworth. Kan. Univ. Geol. Surv., vol. iii, pp. 92–93, 94. 1898.
Carboniferous. Kansas. Included in Upper Coal Measures. Includes Garnett limestones, Lane shales, Iowa limestones, Thayer shales, and Erie limestone.

Potters Clay formation, Rogers. N. J. Geol. Surv., Final Rept., pp. 179–186. 1840.
Cretaceous. New Jersey.

Pottery shale, Wheeler. Mo. Geol. Surv., vol. ix, Sheet Rept., No. 2, p. 65. 1896.
Carboniferous. Missouri. Included in Coal Measures.

Pottstown shale, Lyman. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2607–2608. 1895.
Juratrias. Pennsylvania. Included in New Red.

Pottsville conglomerate, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 520, 535. 1877.
Carboniferous. Pennsylvania. Included in Piedmont sandstone, Kanawha River coal series. Exact syns. Seral, Millstone grit.

Pottsville conglomerate, Stevenson. 2d Pa. Geol. Surv., Rept. K², pp. 91–95. 1877.
Carboniferous. Pennsylvania. Exact syn. Seral.

Pottsville conglomerate, Platt. 2d Pa. Geol. Surv., Rept. H², pp. xxiv–xxvi. 1877.

Pottsville conglomerate, Stevenson. 2d Pa. Geol. Surv., Rept. K³, pp. 44–46. 1878.
Carboniferous. Pennsylvania. Exact. syn. Seral.

Pottsville conglomerate, Ashburner. 2d Pa. Geol. Surv., Rept. F, pp. 191–194. 1878.
Carboniferous. Pennsylvania. Exact. syn. Seral conglomerate.

Pottsville conglomerate, Chance. 2d Pa. Geol. Surv., Rept. V, pp. 31–34. 1879.
Carboniferous. Pennsylvania. Includes Homewood sandstone, Mercer group, Connoquenessing sandstone. Exact syn. No. 12.

Pottsville, Chance. 2d Pa. Geol. Surv., Rept. V², pp. 59–63, 1880.
Carboniferous. Pennsylvania.

Pottsville, Ashburner. 2d Pa. Geol. Surv., Rept. R, pp. 49–62 1880.
Carboniferous. Pennsylvania. Includes Johnson River sandstone, Kinzua Creek sandstone, and Olean conglomerate. Exact syns. Seral, Millstone grit.

Pottsville, White. 2d Pa. Geol. Surv., Rept. Q⁴, pp. 55–65. 1881.
Carboniferous. Pennsylvania. Includes Homewood sandstone, Mercer group, Connoquenessing group, and Sharon group. Exact syn. No. 12.

Pottsville conglomerate, White. 2d Pa. Geol. Surv., Rept. G⁵, pp. 45–53. 1881.
Carboniferous. Pennsylvania. Exact syn. No. 12.

Pottsville, Platt. 2d Pa. Geol. Surv., Rept. H⁶, pp. xxxiii–xxxiv. 1881.
Carboniferous. Pennsylvania. Exact syn. No. 12.

Pottsville, Stevenson. 2d Pa. Geol. Surv., Rept. T², pp. 65–67. 1882.
Carboniferous. Pennsylvania.

Pottsville, Carll. 2d Pa. Geol. Surv., Rept. I⁴, pp. 185–189. 1883.
Carboniferous. Pennsylvania. Includes Johnsons River rock, Kinzua Creek sandstone, and Olean conglomerate. Exact syn. No 12.

Pottsville, White. 2d Pa. Geol. Surv., Rept. T³, pp. 69–73. 1885.
Carboniferous. Pennsylvania. Includes Homewood (Johnson River) sandstone, Connoquenessing (Kinzua Creek) sandstones, and Sharon conglomerate.

Pottsville conglomerate, Ashburner. 2d Pa. Geol. Surv., Rept. R², p. 399. 1885.
Carboniferous. Pennsylvania. Exact syn. No. 12.

Pottsville conglomerate, Winslow. 2d Pa. Geol. Surv., Ann. Rept., 1886, pt. iv, pp. 1337, 1363. 1887.
Carboniferous. Pennsylvania. Exact syn. No. 12.

Pottsville, Carll. 2d Pa. Geol. Surv., Rept. I⁵, pp. 111–112, 126–128. 1890.
Carboniferous. Pennsylvania.

Pottsville conglomerate, White. U. S. Geol. Surv., Bull. No. 65, p. 179. 1891.
Carboniferous. Ohio, Pennsylvania, West Virginia. Included in Homewood sandstone, Mercer group, Connoquenessing sandstone, New River Coal group, and Sharon conglomerate.

Pottsville conglomerate, White. Geol. Soc. Am., Bull., vol. iii, p. 190. 1892.
Upper Carboniferous. West Virginia.

Pottsville, Williams and Clark. Maryland. Its Resources, Industries, and Institutions, p. 72. 1893.
Carboniferous. Maryland. Part. syn. No. xii.

Pottsville conglomerate, Smith. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1853–1855, 1949–1951 et seq. 1895.
Carboniferous. Pennsylvania. Exact syn. No. xii.

Pottsville conglomerate, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. i, pp. 1857–1915. 1895.

Carboniferous. Pennsylvania. Includes Homewood or Johnson River sandstone, Connoquenessing or Kinzua sandstone, and Sharon, Olean, or Garland conglomerate. Exact syn. No. 12, Seral conglomerate of Rogers.

Pottsville formation, Clark. Md. Geol. Surv., vol. i, pp. 156, 185–186. 1897.

Carboniferous. Maryland. Exact. syn. Blackwater formation.

Pottsville, Clark. Md. Geol. Surv., vol. ii, p. 208. 1898.

Carboniferous. Maryland. Included in Coal Measures.

Pottsville conglomerate, White. W. Va. Geol. Surv., vol. i, p. 202. 1899.

Carboniferous. West Virginia.

Pottsville, Clark. Md. Geol. Surv., vol. iii, p. 100. 1899.

Carboniferous. Maryland. Included in Coal Measures.

Pottsville formation, White. U. S. Geol. Surv., 20th Ann. Rept., pt. ii, pp. 755–865. 1900.

Carboniferous. Pennsylvania. Includes Clark, Quinnemont, Sewell, and Lookout formations, and Fayette sandstone.

Pottsville formation, O'Harra. Md. Geol. Surv., Allegany County, p. 113. 1900.

Carboniferous. Maryland.

Poughquag limestone and quartzite, Dana. Am. Jour. Sci., 3d ser., vol. iii, pp. 252–253, 255. 1872.

Silurian. New York.

Powelton shale, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 61–62. 1885.

Carboniferous. Pennsylvania.

Poxono Island shale, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 145–147. 1882.

Silurian. Pennsylvania. Included in Upper Helderburg or No. vi.

Poxono Island shale and limestone, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 934–935. 1892.

Silurian. Pennsylvania. Included in No. vi.

Poxono Island shale, Weller. N. J. Geol. Surv., Rept. 1899, pp. 5–6. 1900.

Silurian. New Jersey.

Prairie Bluff limestone, Winchell. Am. Assoc. Adv. Sci., Proc., vol. x, p. 90. 1856.

Cretaceous. Alabama. Included in Upper Cretaceous.

Prairie d'Ane or White Clay till, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 32–33. 1888.

Post-Tertiary. Arkansas.

Pre-Meridian series, Rogers. Geol. of Pa., vol. i, pp. 107, 136–137, 272 et seq., vol. ii, p. 754. 1858.

Silurian. Pennsylvania. Exact. syn. Lower Helderberg.

Preston beds, Hill. Geol. Soc. Am., Bull., vol. v, p. 302. 1894.

Cretaceous. Texas. Included in Washita division. Includes Duck Creek and Kiamitia.

Price sandstone, Campbell. Geol. Soc. Am., Bull., vol. v, pp. 171, 177. 1894.

Lower Carboniferous. Virginia. Included in Pocono.

Price, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 26. 1896.

Carboniferous. Virginia and West Virginia.

Price sandstone, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.

Carboniferous. Virginia and West Virginia. Exact syn. No. x, Montgomery grits.

Primal series, Rogers. Am. Jour. Sci., 1st ser., vol. xlvii, p. 155. 1844.

Primal series, Rogers. Geol. of Pa., vol. i, pp. 104, 122–123, 150–207 et seq., vol. ii, p. 751. 1858.

Cambrian. Pennsylvania. Part. syn. Potsdam.

Primal, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 126, 251, 288. 1891.
Cambrian. Appalachian region.

Primedidial series, Rogers. Am. Jour. Sci., 1st ser., vol. xlvii, p. 155. 1844.
Silurian. Includes Pentamerus and Catskill shaly limestone and Oriskany limestone.

Princeton conglomerate, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 26. 1896.
Carboniferous. Virginia and West Virginia.

Princeton conglomerate, Campbell and Mendenhall. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 489. 1896.
Carboniferous. West Virginia. Included in No. xii of Rogers, Conglomerate series of Fontaine.

Princeton conglomerate, Campbell. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 44. 1897.
Carboniferous. Virginia and West Virginia. Part. syns. No. xi, Greenbrier shale Rogers.

Procamelus beds, Cope. U. S. Geol. and Geog. Surv. of Terr., vol. v, pp. 51–52. 1879.
Tertiary. Included in Loup Fork.

Proctor limestone, Keyes. Mo. Geol. Surv., vol. vi, p. 331. 1894.
Cambrian. Missouri. Included in Gasconade limestone, Ozark series.

Productal limestone, Owen. Geol. Reconn. State of Indiana, Rept. in 1837, p. 22. 1859.
Indiana. Included in Subcarboniferous limestone.

Productive coal measures, Upper and Lower, Rogers. Geol. of Pa., vol. 1, p. 109. 1856.
Carboniferous. Pennsylvania. Included in Seral series.

Productive measures, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K, pp. 57–74, 84–88. 1876.
Carboniferous. Pennsylvania. Includes Waynesburg sandstone, Great limestone, Fishpot limestone, and Pittsburg sandstone.

Productive series, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K^2, pp. 30–63. 1877.
Carboniferous. Pennsylvania. Includes Waynesburg sandstone and limestone, Great limestone, Fishpot limestone, and Redstone limestone.

Productive series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K^2, pp. 73–90. 1877.
Carboniferous. Pennsylvania and West Virginia. Includes Mahoning sandstone, Freeport limestone, and Piedmont sandstone (= Tionesta).

Productive series, Lower, White. 2d Pa. Geol. Surv., Rept. Q^2, pp. 27–51. 1877.
Carboniferous. Pennsylvania. Includes Freeport or Butler sandstone and limestone, Kittanning sandstone, and Ferriferous limestone.

Productive measures, Lower, Ashburner. 2d Pa. Geol. Surv., Rept. F, pp. 184–191. 1878.
Carboniferous. Pennsylvania. Exact syn. Allegheny River series.

Productive series, Upper, White. 2d Pa. Geol. Surv., Rept. Q, pp. 21–22. 1878.
Carboniferous. Pennsylvania.

Productive series, Lower, White. 2d Pa. Geol. Surv., Rept. Q, pp. 39–64. 1878.
Carboniferous. Pennsylvania. Includes Freeport limestone, Butler sandstone and limestone, Kittanning sandstone, and Ferriferous limestone.

Productive series, Upper, Stevenson. 2d Pa. Geol. Surv., Rept. K^3, pp. 14–17. 1878.
Carboniferous. Pennsylvania.

Productive series, Lower, Stevenson. 2d Pa. Geol. Surv., Rept. K^3, pp. 27–43. 1878.
Carboniferous. Pennsylvania. Includes Mahoning sandstone, Freeport limestone and sandstone, Kittanning limestone, Bolivar sandstone, and Clarion sandstone.

Productive measures, Upper, Platt. 2d Pa. Geol. Surv., Rept. H^4, pp. 155–165. 1878.
Carboniferous. Pennsylvania.

Productive measures, Lower, Platt. 2d Pa. Geol. Surv., Rept. H^4, pp. 175–231. 1878.
Carboniferous. Pennsylvania.

Productive measures, Lower, Chance. 2d Pa. Geol. Surv., Rept. V, pp. 15–29. 1879.
Carboniferous. Pennsylvania. Includes Freeport group, Mahoning sandstone, Kittanning group, and Ferriferous limestone.

Productive measures, Lower, White. 2d Pa. Geol. Surv., Rept. Q^3, pp. 22–32. 1880.
Carboniferous. Pennsylvania. Includes Ferriferous limestone.

Productive measures, Lower, Ashburner. 2d Pa. Geol. Surv., Rept. R, pp. 45–48. 1880.
Carboniferous. Pennsylvania.

Productive measures, Lower, Chance. 2d Pa. Geol. Surv., Rept. V^2, pp. 31–56. 1880.
Carboniferous. Pennsylvania. Includes Freeport group, Kittanning group, Johnstown cement limestone, Clarion group, and Ferriferous limestone.

Productive measures, Upper, Platt. 2d Pa. Geol. Surv., Rept. H^5, pp. 43–291. 1880.
Carboniferous. Pennsylvania.

Productive measures, Lower, Platt. 2d Pa. Geol. Surv., Rept. H^5, p. 313. 1880.
Carboniferous. Pennsylvania.

Productive measures, Lower, Chance. 2d Pa. Geol. Surv., Rept. H^7, pp. 25–80. 1884.
Carboniferous. Pennsylvania.

Productive measures, Lower, Ashburner. 2d Pa. Geol. Surv., Rept. R^2, p. 393. 1885.
Carboniferous. Pennsylvania.

Productive measures, Upper, D'Invilliers. 2d Pa. Geol. Surv., Ann. Rept., 1885, pp. 171–177. 1886.
Carboniferous. Pennsylvania.

Productive measures, Lower, Platt. 2d Pa. Geol. Surv., Rept. H^6, pp. xxix–xxxii. 1887.
Carboniferous. Pennsylvania. Included in Freeport group, Kittanning group, and Clarion group.

Productive measures, Upper, D'Invilliers. 2d Pa. Geol. Surv., Ann. Rept., 1886, pp. 63–74, 206–208, 264–265, 291–295, 336–341. 1887.
Carboniferous. Pennsylvania. Exact syn. Monongahela River series.

Productive measures, Lower, D'Invilliers. 2d Pa. Geol. Surv., Ann. Rept., 1886, pp. 79–81. 1887.
Carboniferous. Pennsylvania. Exact syn. Allegheny River series.

Productive measures, Upper, Carll. 2d Pa. Geol. Surv., Rept. I^5, pp. 122–123. 1890.
Carboniferous. Pennsylvania. Exact syn. Monongahela series.

Productive measures, Lower, Carll. 2d Pa. Geol. Surv., Rept. I^5, pp. 125–126. 1890.
Carboniferous. Pennsylvania. Exact syn. Allegheny series.

Productive group, Squire. Ala. Geol. Surv., Rept. on Cahaba coal field, p. 14 et seq. 1890.
Carboniferous. Alabama. Included in Coal Measures.

Productive series, Upper, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2448–2564. 1895.
Carboniferous. Pennsylvania. Exact syns. No. xv, Monongahela River series.

Productive measures, Lower, D'Invilliers. 2d Pa. Geol. Surv., Final Rept., vol. iii, pt. ii, pp. 2155–2405. 1895.
Carboniferous. Pennsylvania. Exact syns. No. xiii, Allegheny River series.

Prospect Mountain limestone and quartzite, Hague. U. S. Geol. Surv., 3d Ann. Rept., pp. 253, 254. 1883.
Cambrian. Nevada.

Prospect, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 252, 313. 1891.
Cambrian. Nevada.

Prospect Mountain limestone, Hague. U. S. Geol. Surv., Mon., vol. xx, p. 36. 1892.
Cambrian. Nevada.

Prospect Mountain quartzite, Hague. U. S. Geol. Surv., Mon., vol. xx, p. 35. 1892.
Cambrian. Nevada.

Proteau group, Vanuxem. N. Y. Geol. Surv., 4th Ann. Rept., pp. 374–375. 1840.
Silurian. New York.

Proteau group, Hall. Am. Jour. Sci., 1st ser., vol. xlii, p. 60. 1842.
New York and Ohio.

Protoceras beds, Wortman. Am. Mus. Nat. Hist., Bull., vol. v, 1893, pp. 101–102. 1893.
Lower Miocene. South Dakota. Included in White River sediments. Includes Uppermost strata of Oreodon beds.

Protoceras, Wortman. Am. Mus. Nat. Hist., Bull., vol. v, pp. 96, 101. 1893.
Tertiary. Included in White River or Lower Miocene.

Pteranodon beds, Marsh. U. S. Geol. Surv., Mon., vol. xxvii, p. 476. 1896.
Cretaceous. Colorado.

Pteranodon beds, Logan. Jour. of Geol., vol. vii, pp. 90–91. 1899.
Cretaceous. Kansas and Nebraska. Included in Niobrara. Exact syns. Apishapa and Upper Timber beds.

Puckwunge conglomerate, Winchell. Am. Geol., vol. xx, pp. 50–51. 1897.
Algonkian. Minnesota.

Puckwunge conglomerate, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. iv. pp. 13, 517. 1899.
Cambrian. Minnesota. Included in Keweenawan.

Puckwunge conglomerate, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. v, p. 54. 1900.
Cambrian. Minnesota.

Puerco marl, Cope. Rept. of Secy. of War to 44th Cong., vol. ii, pt. ii, p. 1012. 1875.
Tertiary. New Mexico. Included in Eocene.

Puerco marl, Holmes. U. S. Geol. and Geog. Surv. of Terr., 9th Ann. Rept., p. 248. 1877.
Cretareous. Colorado. Exact syn. Bad Land group.

Puerco marl, Endlich. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., p. 123. 1878.
Tertiary. Colorado. Included in Wahsatch group.

Puerco, Cope. U. S. Geol. and Geog. Surv. of Terr., Mon., vol. iii, pp. 3–6. 1881.
Tertiary.

Puerco, Clark. U. S. Geol. Surv., Bull. No. 83, p. 137. 1891.
Tertiary. Colorado and New Mexico.

Puerco beds, Osborn and Earle. Am. Mus. Nat. Hist., Bull., vol. vii, 1895, pp. 1–3. 1895.
New Mexico. Included in Basal Eocene.

Puerco beds, Marcou. Am. Geol., vol. xix, pp. 120–121. 1897.
Tertiary.

Puerco, Matthew. Am. Mus. Nat. Hist., Bull., vol. ix, 1897, pp. 259–323. 1897.
Eocene. New Mexico. Included in Basal Eocene.

Puerco beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 347. 1898.
Tertiary. New Mexico and Colorado. Included in Eocene. Part. syn. Torregon formation.

Puerco formation, Smith. Jour. of Geol., vol. viii, pp. 448–449. 1900.
Tertiary. Western North America. Included in Eocene.

Puget group, White. Am. Jour. Sci., 3d ser., vol. xxxvi, pp. 443–450. 1888.
Cretaceous. Washington. Exact syn. Laramie.

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Cretaceous. New Jersey.

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Colorado. Included in Trias.

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Colorado, Utah. Included in Trias. Includes Star Peak, Koipato.

Red beds, Endlich. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 72, 128. 1878.
Colorado.

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Silurian. Alabama.

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Silurian. Alabama. Included in Niagara. Exact syn. Clinton.

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Silurian. Alabama. Included in Upper Silurian. Exact syns. Clinton and Rockwood.

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Cretaceous. Texas.

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Cretaceous. Texas. Included in Lower Cretaceous (Middle Cretaceous) according to Marcou.

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Cretaceous. Texas.

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Post-Tertiary. Arkansas, Texas, and Indian Territory.

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Cretaceous. Texas. Included in Upper Cretaceous. Exact syn. Lower Cross Timber division.

Red sandrock series, Hitchcock. Geol. of Vt., vol. i, pp. 326–342. 1861.
Silurian. Vermont. Includes Gray sandstone, Red sandrock, Medina sandstone, Quebec group.

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Juratrias. New Jersey.

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Carboniferous. Ohio, Pennsylvania, and West Virginia. Included in Barren Measures, Elk River series.

Red sandrock, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 96, 250, 277. 1891.
Cambrian. Appalachian region.

Red Sand formation, Clark. N. J. State Geol., Ann. Rept., 1892, pp. 199–201. 1893.
Cretaceous. New Jersey.

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Carboniferous. Utah.

Red Wall, Powell. U. S. Geog. and Geol. Surv., Geol. of Uinta Mountains, pp. 41, 56, 57–60, 147. 1876.
Carboniferous. Utah.

Red Wall group, Dutton. U. S. Geol. Surv., 6th Ann. Rept., p. 132. 1885.
Carboniferous. Northwest New Mexico. Included in Lower Carboniferous.

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Lower Carboniferous. Arizona. Included in Carboniferous.

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Silurian. Missouri. Included in Lower Silurian and Calciferous sand rock.

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Silurian. Missouri. Included in Lower Silurian.

Saccharoidal sandstone, Broadhead. Mo. Geol. Surv., Rept., 1873–74, pp. 29. 1874.
Lower Silurian. Missouri. Included in Magnesian limestone series.

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Saddle Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 416. 1893.
Carboniferous. Texas. Included in Cisco division.

Sailor Canyon, Turner. Am. Geol., vol. xiii, p. 232. 1894.
Juratrias. California.

Sailor Canyon formation, Lindgren. U. S. Geol., Surv., Geol. Atlas of U. S., Folio No. 39. 1897.
Juratrias. California. Included in Bed Rock series.

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Juratrias. California. Included in Bed Rock series.

St. Albans group, Marcou. Boston Boc. Nat. Hist., Proc., vol viii, 1861–62, pp. 241, 246, 251. 1861.
Vermont and Canada. Included in Upper Taconic of Marcou.

St. Anthony sandstone, Hopkins. Indiana Dept. Geol. and Nat. Res., 20th Ann. Rept., 1895, p. 312. 1896.
Indiana.

St. Clair marble (limestone), Hopkins. Ark. Geol. Surv., 1890, vol. iv, pp. 50, 212–252. 1890.
Silurian. Arkansas.

St. Clair limestone, Penrose. Ark. Geol. Surv., 1890, vol. i, pp. 124–128, 166–184. 1890.
Silurian. Arkansas.

St. Clair shales, Lane. Mich. Geol. Surv., Rept. State Board, 1891, 1892, p. 66. 1893.
Devonian. Michigan.

St. Clair limestone, Williams. Am. Jour. Sci., 3d ser., vol. xlvii, pp. 326–329. 1894.
Silurian. Arkansas. Included in Ordovician.

St. Clair shales, Lane. Mich. Geol. Surv., vol. v, pt. ii, p. 21. 1895.
Michigan.

St. Clair shales, Lane. U. S. Geol. Surv., Water-Supply Papers, No. 30, pl. vi. 1899.
Carboniferous. Michigan. Part. syns. Ohio and Black shale.

St. Clair shales, Sherzer. Mich. Geol. Surv., vol. vii, pt. i, pp. 25–30. 1900.
Devonian. Michigan. Exact syn. Genesee.

St. Clair limestone, Williams. Ark. Geol. Surv., 1892, vol. v, pp. 281–301. 1900.
Silurian. Arkansas. Included in Niagara.

St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 1st Ann. Rept., 1872, pp. 68–80. 1873.
Lower Silurian. Minnesota.

St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., p. 31. 1876.
Lower Silurian. Minnesota.

St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 5th Ann. Rept., pp. 29–34. 1877.
Lower Silurian. Minnesota.

St. Croix sandstone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 424. 1884.
Minnesota.

St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, pp. 223, 257, 281. 1884.
Minnesota.

St. Croix formation, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. xxi, 13, 31. 1888.
Minnesota. Includes Jordan sandstone, St. Lawrence limestone + certain sands and sandy shales.

St. Croix sandstone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, p. 407. 1888.

St. Croix sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 17th Ann. Rept., pp. 56–64. 1889.
Minnesota.

St. Croix shales, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, No. 1, p. 134. 1889.
Cambrian. Minnesota. Included in St. Croix formation as middle member. Part. syn. 4th Magnesian limestone of Missouri.

St. Croix sandstones, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, No. 1, p. 134. 1889.
Cambrian. Minnesota. Included in St. Croix formation as lowest of three members.

St. Croix, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 245, 330. 1891.
Cambrian. Mississippi Valley.

St. Croix sandstone, Keyes. Iowa Geol. Surv., 1st Ann. Rept., vol. i, pp. 20–21. 1893.
Cambrian. Iowa. Included in Upper Cambrian. Exact syn. Potsdam.

St. Croix sandstone, Calvin. Iowa Geol. Surv., vol. iv, pp. 54–61. 1895.
Cambrian. Iowa. Included in Potsdam series.

St. Croix sandstone, Norton. Iowa Geol. Surv., vol. iii, pp. 184–186. 1895.
Cambrian. Iowa.

St. Elias schist, Russell. Nat. Geog. Mag., vol. iii, pp. 167, 173–174. 1891.
Alaska.

St. Elias schist, Upham. Geol. Soc. Am., Bull., vol. iv, p. 190. 1893.
Pleistocene (?). Alaska.

St. Francois limestone, Keyes. Mo. Geol. Surv., vol. vi, pp. 331, 349, 352. 1894.
Cambrian. Missouri. Included in Ozark series. Includes Potosi limestone and St. Joseph limestone.

St. Francois, Keyes. Mo. Geol. Surv., vol. vii, pt. ii, p. 649. 1894.
Lower Silurian. Missouri.

St. Genevieve limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, p. 406. 1857.
Lower Carboniferous. Missouri. Included in Mountain limestone.

St. Genevieve limestone, Shumard. Mo. Geol. Surv., Rept., 1855–1871, p. 293. 1873.
Carboniferous. Missouri. Included in Lower Carboniferous.

St. Genevieve, Keyes. Geol. Soc. Am., Bull., vol. iii, pp, 284, 287. 1892.
Lower Carboniferous. Missouri.

St. Genevieve limestone, Keyes. Mo. Geol. Surv., vol. iv, pp. 30, 76. 1894.
Lower Carboniferous. Missouri. Included in St. Louis stage.

St. Genevieve limestone, Keyes. Mo. Geol. Surv., vol. vii, pt. ii, p. 390. 1894.
Lower Carboniferous. Missouri. Included in St. Louis stage.

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Carboniferous. Arkansas. Included in Lower Carboniferous.

St. Joe limestone, Gallager. Mo. Geol. Surv., Bien. Rept., p. 52. 1898.
Upper Carboniferous. Missouri. Included in Upper Coal Measures.

St. Johns slate, Jukes. General Rept. on Geol. of Newfoundland, p. 51 et seq. 1843.
Cambrian(?). Newfoundland.

St. John shales, Dawson. Am. Jour. Sci., 2d ser., vol. xxxv, pp. 314–319. 1863.
Devonian. Canada. Included in St. John group or series.

St. John group, Dawson. Am. Jour. Sci., 2d ser., vol. xxxv, pp. 314–319. 1863.
Devonian. Canada. Includes St. John shales.

St. John group, Matthew. Can. Nat., vol. viii, pp. 244, 247–251. 1863.
Cambrian. New Brunswick.

St. John series, Dawson. Regents Univ. of N. Y., 16th Ann. Rept., pp. 97–109; Quart. Jour. Geol. Soc., vol. xviii, p. 296. 1863.
Devonian or Upper Silurian. New Brunswick. Included in Middle and Lower Devonian, Upper Silurian. Includes Catskill, Chemung, Portage, Genesee, Hamilton, Corniferous, Oriskany and Schoharie.

St. Jean (John) group, Bailey and Matthew. Can. Geol. Surv., Rept. 1870–71, pp. 138–148. 1873.
Lower Silurian. New Brunswick. Exact syn. Acadian group.

St. John group, Matthew. Can. Geol. Surv., Rept. 1876–77, p. 342. 1878.
New Brunswick.

St. John group, Bailey. Can. Geol. Surv., Rept. 1877–78, p. 28D^2. 1879.
Cambrian. New Brunswick. Included in Primordial Silurian. Exact syn. Acadian group.

St. John group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. 4, p. 271. 1881.

St. John group, Matthew. Can. Roy. Soc., Proc. and Trans., vol. i, sec. iv, pp. 87–108, 271–279; vol. ii, sec. iv, pp. 99–124; vol. iii, sec. iv, pp. 29–84; vol. v, sec. iv, pp. 115–166; vol. viii, sec. iv, pp. 123–166; vol. ix, sec. iv, pp. 95–110; vol. xi, sec. iv, pp. 85–130. 1883–1893.
Cambrian. New Brunswick.

St. John group, Matthew. N. B. Nat. Hist. Soc. Bull., vol. i, 1882–86, pp. 97–102. 1885.
Cambrian. New Brunswick.

St. John group, Matthew. Can. Rec. Sci., vol. ii, pp. 357–363. 1887.
Cambrian. New Brunswick.

St. John group, Matthew. Can. Roy. Soc., Proc. and Trans., vol. vii, sec. iv, pp. 123–129. 1890.
Cambrian. New Brunswick.

St. John, Walcott. U. S. Geol. Surv., Bull. No. 81, pp. 248, 264. 1891.
Cambrian. Newfoundland.

St. John group, Matthew. Can. Roy. Soc., Trans., new ser., vol. iii, sec. iv, pp. 165–211. 1897.
Cambrian. New Brunswick.

St. John group, Matthew. Can. Roy. Soc., Trans., new ser., vol. iv, sec. iv, p. 123. 1898.
Cambrian. New Brunswick.

St. John group, Walcott. Wash. Acad. Sci., Proc., vol. i, p. 324. 1900.
Cambrian. Newfoundland.

St. Joseph limestone, Keyes. Mo. Geol. Surv., vol. vi, p. 331. 1894.
Cambrian. Missouri. Included in St. Francois limestone, Ozark series. Part. syn. Osage limestone, Cole Camp limestone.

St. Joseph limestone, Winslow. U. S. Geol. Surv., Bull. No. 132, p. 14. 1896.
Missouri.

St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 2d Ann. Rept., pp. 152–155. 1874.
Lower Silurian. Minnesota.

St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., pp. 32–34. 1876.
Lower Silurian. Minnesota. Included in Lower Magnesian as lowest portion.

St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 5th Ann. Rept., p. 29. 1877.
Lower Silurian. Minnesota.

St. Lawrence, Upham. Minn. Geol. and Nat. Hist. Surv., 8th Ann. Rept., p. 103. 1880.
Lower Silurian. Minnesota.

St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, pp. 222, 253, 282. 1884.
Minnesota.

St. Lawrence limestone, Harrington. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 334. 1884.
Cambrian. Minnesota.

St. Lawrence limestone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 424. 1884.
Minnesota.

St. Lawrence, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. 70, 381. 1888.
Cambrian. Minnesota.

St. Lawrence limestone, Upham. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. 119, 160. 1888.
Cambrian. Minnesota.

St. Lawrence limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, p. xxii. 1888.
Minnesota. Included in St. Croix. Exact syn. Mendota limestone of Wisconsin Survey.

St. Lawrence formation, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, No. 1, p. 134. 1889.
Cambrian. Minnesota. Exact syn. Mendota limestone of Irving.

St. Lawrence formation, Hopkins. Ark. Geol. Surv., 1890, vol. iv., p. 50. 1890.
Cambrian. Arkansas.

St. Lawrence limestone, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, p. 341. 1892.
Ordovician. Minnesota. Included in Magnesian series.

St. Lawrence limestone, Keyes. Iowa Geol. Surv., vol. i, p. 23. 1893.
Cambrian. Iowa. Included in St. Croix sandstone. Exact syn. Mendota limestone.

St. Lawrence stage, Upham. Am. Geol., vol. xvi, p. 106. 1895.
Pleistocene. Included in Champlain epoch.

St. Lawrence, Hall and Sardeson. Geol. Soc. Am., Bull., vol vi, pp. 167, 172. 1895.
Cambrian(?). Minnesota. Included in Magnesian series.

St. Louis limestone, Englemann. Am. Jour. Sci., 2d ser., vol. iii, pp. 119-120. 1847.
Lower Carboniferous. Illinois. Included in Mountain limestone.

St. Louis limestone, Swallow. Mo. Geol. Surv., 1st and 2d Ann. Repts., pp. 93, 174. 1855.
Carboniferous. Missouri. Included in Mountain or Lower Carboniferous limestone.

St. Louis limestone, Shumard. Mo. Geol. Surv., 1st and 2d Ann. Repts., pt. ii, pp. 139, 170, 181. 1855.
Carboniferous. Missouri.

St. Louis, Hall. Am. Assoc. Adv. Sci., Proc., vol. x, p. 56. 1856.
Carboniferous. Mississippi Valley. Exact syn. Concretionary limestone.

St. Louis limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, p. 407. 1857.
Lower Carboniferous. Missouri. Included in Mountain limestone.

St. Louis limestone, Hall. Iowa Geol. Surv., vol. i, pt. i, pp. 98-100. 1858.
Carboniferous. Iowa. Exact. syn. Concretionary limestone.

St. Louis limestone, Hall. Albany Inst., Trans., vol. iv, pp. 2-3. 1864.
Carboniferous. Mississippi Valley. Exact syn. Concretionary limestone.

St. Louis group, Worthen. Ill. Geol. Surv., vol. i, pp. 41-43, 83-89. 1866.
Carboniferous. Illinois. Includes Warsaw limestone.

St. Louis limestone, Worthen. Ill. Geol. Surv., vol. i, pp. 292, 321, 333-334, 352, 353-354. 1866.
Carboniferous. Illinois.

St. Louis group, Engelmann. Ill. Geol. Surv., vol. i, pp. 378-381, 413-414, 435-438, 459. 1866.
Carboniferous. Illinois.

St. Louis, limestone, Engelmann. St. Louis Acad. Sci., Trans., vol. ii, p. 189. 1868.
Lower Carboniferous. Illinois.

St. Louis limestone, White. Am. Jour. Sci., 2d ser., vol. xlv, p. 333. 1868.
Carboniferous. Iowa.

St. Louis limestone, Worthen. Ill. Geol. Surv., vol. iii, pp. 42-44, 64-65, 111-112, 127-128, 138-140. 1868.
Carboniferous. Illinois.

St. Louis group, Worthen. Ill. Geol. Surv., vol. iv, pp. 15, 32, 51, 68, 84, 103. 1870.
Carboniferous. Illinois.

St. Louis limestone, White. Iowa Geol. Surv., vol. i, pp. 215-222, 225-230. 1870.
Carboniferous. Iowa. Included in Subcarboniferous. Exact syn. concretionary limestone. Part. syn. Warsaw limestone.

St. Louis limestone, Shumard. Mo. Geol. Surv., Rept., 1855-1871, pp. 293, 320. 1873.
Carboniferous. Missouri. Included in Lower Carboniferous.

St. Louis limestone, Worthen. Ill. Geol. Surv., vol. v, pp. 260, 274-277. 1873.
Carboniferous. Illinois.

St. Louis limestone, Broadhead. Mo. Geol. Surv., Rept., 1873–1874, pp. 24, 184. 1874.
Carboniferous. Missouri. Included in Lower Carboniferous Mountain limestone.

St. Louis or Coral limestone, Killebrew and Safford. Res. of Tenn., pp. 40–41. 1874.
Carboniferous. Tennessee. Included in Lower Carboniferous period.

St. Louis group, Norwood. Ky. Geol. Surv., new ser., vol. i, pp. 362–366. 1876.
Carboniferous. Kentucky. Included in Lower Carboniferous.

St. Louis limestone, Shaler. Ky. Geol. Surv., new ser., vol. iii, p. 54. 1877.
Carboniferous. Kentucky. Included in Subcarboniferous limestone.

St. Louis group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. 4, p. 290. 1881.

St. Louis series, Vogdes. N. Y. Acad. Sci., Annals, vol. iv, pp. 72–73. 1889.
Carboniferous. Mississippi Valley, Kentucky. Includes Spergen Hill limestone of Illinois.

St. Louis group, Miller. N. A. Geol. and Pal., p. 71. 1889.

St. Louis, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 55. 1890.
Carboniferous. Arkansas. Included in Lower Carboniferous. Exact. syn. Warsaw + Concretionary limestone.

St. Louis limestone, Ladd. Mo. Geol. Surv., Bull. No. 3, pp. 14, 15. 1890.
Lower Carboniferous. Missouri.

St. Louis limestone, Sullivan. Ky. Geol. Surv. (Proctor), Geol. of Jackson and Rockcastle Cos. 1891.
Carboniferous. Kentucky.

St. Louis group, Orton. Ky. Geol Surv., Rept. on Petroleum, etc., p. 135. 1891.
Carboniferous. Kentucky.

St. Louis, Gordon. Am. Geol., vol. ix, p. 185. 1892.
Carboniferous. Iowa.

St. Louis limestone, Keyes. Geol. Soc. Am., Bull., vol. iii, pp. 283, 294. 1892.
Lower Carboniferous. Missouri. Includes St. Genevieve limestone, St. Louis limestone, and Warsaw limestone in part from St. Louis group.

St. Louis slates, Van Hise. Int. Cong. of Geol., 5th sess., pl. xiv. 1893.
Algonkian. Lake Superior region. Included in Huronian.

St. Louis limestone, Bain. Iowa Geol. Surv., vol. i, pp. 173–179. 1893.
Carboniferous. Iowa.

St. Louis, Keyes. Am. Geol., vol. xii, p. 99. 1893.
Carboniferous. Iowa.

St. Louis limestone, Keyes. Iowa Geol. Surv., vol. i, p. 72. 1893.
Carboniferous. Iowa. Included in Mississippian series.

St. Louis stage, Keyes. Mo. Geol. Surv., vol. iv, pp. 30, 71–72, 76. 1894.
Lower Carboniferous. Missouri. Includes St. Genevieve sandstone, St. Louis limestone, and Warsaw (in part).

St. Louis stage, Keyes. Mo. Geol. Surv., vol. vii, pt. ii, p. 390. 1894.
Lower Carboniferous. Missouri. Included in St. Genevieve limestone, St. Louis, and Warsaw (in part).

St. Louis limestone, Keyes. Iowa Geol. Surv., vol. iii, pp. 264–265, 345–352, 447–448. 1895.
Carboniferous. Iowa. Included in Mississippian series.

St. Louis, Bain. Iowa Geol. Surv., vol. iv, pp. 277–282, 333–336. 1895.
Carboniferous. Iowa. Included in Mississippian series. Includes Springvale and Pella beds and Verdi beds.

St. Louis formation, Gordon. Jour. of Geol., vol. iii, pp. 289–311. 1895.
Carboniferous. Iowa.

St. Louis, Gordon. Iowa Geol. Surv., vol. iv, pp. 214–222. 1895.
Carboniferous. Iowa.

St. Louis, Bain. Iowa Geol. Surv., vol. v, pp. 143–151. 1896.
Carboniferous. Iowa. Included in Mississippian series. Includes Springvale, Verdi, and Pella beds.

St. Louis conglomerate, Hubbard. Mich. Geol. Surv., vol. vi, pt. ii, p. 79. 1898.
Michigan.

St. Louis stage, Beyer. Iowa Geol. Surv., vol. ix, p. 182. 1899.
Carboniferous. Iowa. Included in Mississippian series.

St. Louis, Macbride. Iowa Geol. Surv., vol. ix, p. 127. 1899.
Carboniferous. Iowa. Included in Mississippian series.

St. Marys group, Heilprin. Phil. Acad. Nat. Sci., Proc., vol. xxxii, p. 23. 1880.
Maryland.

St. Mary River series, Dawson. Can. Geol. Surv., Rept., 1880-81-82, p. 5B. 1883.
Canada. Included in Laramie.

St. Mary River beds, Dawson. Can. Geol. Surv. Rept., 1882-83-84, pp. 56C-57C, 58C, 65C-68C, 112C-114C. 1885.
Canada. Included in Laramie.

St. Peters sandstone, Hall. Iowa Geol. Surv., vol. i, pt. i, pp. 52-54. 1858.
Silurian. Iowa.

St. Peters sandstone, Whitney. Iowa Geol. Surv., vol. i, pt. i, pp. 337-341. 1858.
Silurian. Iowa.

St. Peters sandstone, Hall and Whitney. Am. Jour. Sci., 2 ser., vol. xxvii, p. 107. 1859.
Silurian. Iowa.

St. Peters sandstone, Everett. Ill. Nat. Hist. Soc., Trans., vol. i, ser. i, pp. 54-56. 1861.

St. Peters, Hall. Regents Univ. of N. Y., 16th Ann. Rept., pp. 119-123. 1863.
Silurian. Upper Mississippi Valley. Exact syn. Chazy.

St. Peters sandstone, Freeman. Ill. Geol. Surv., vol. iii, pp. 279-280. 1866.
Silurian. Illinois.

St. Peter sandstone, Whitney. Ill. Geol. Surv., vol. i, pp. 164-165. 1866.
Silurian. Illinois.

St. Peters sandstone, Worthen. Ill. Geol. Surv., vol. i, pp. 149-151. 1866.
Silurian. Illinois. Exact syn. Saccharoidal sandstone. Part. syn. Calciferous series.

St. Peters sandstone, Worthen. Ill. Geol. Surv., vol. iv, p. 3, 1870.
Silurian. Illinois.

St. Peters sandstone, White. Iowa Geol. Surv., vol. i, p. 174. 1870.
Silurian. Iowa. Included in Primordial group of Lower Silurian.

St. Peter sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 1st Ann. Rept., pp. 88-92. 1873.
Lower Silurian. Minnesota.

St. Peters sandstone, Shaw. Ill. Geol. Surv., vol. v, pp. 23-24, 115-118, 126-128. 1873.
Silurian. Illinois.

St. Peter sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 2d Ann. Rept., pp. 132-135. 1874.
Lower Silurian. Minnesota.

St. Peters sandstone, Irving. Am. Jour. Sci., 3d ser., vol. ix, p. 443. 1875.
Silurian. Wisconsin. Included in Canadian.

St. Peter sandstone, Harrington. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., p. 88. 1876.
Lower Silurian. Minnesota.

St. Peter sandstone, Winchell. Geol. and Nat. Hist. Surv., 4th Ann. Rept., p. 40. 1876.
Lower Silurian. Minnesota.

St. Peter sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., 5th Ann. Rept., p. 26. 1877.
Lower Silurian. Minnesota.

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Lower Silurian. Wisconsin.

St. Peters sandstone, Chamberlin. Geol. of Wisconsin, vol. ii, pp. 285–290. 1877.
Lower Silurian. Wisconsin.

St. Peters sandstone, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. 4, p. 280. 1881.

St. Peters sandstone, Wooster. Geol. of Wis., vol. iv, p. 129. 1882.
Wisconsin.

St. Peters sandstone, Strong. Geol. of Wis., vol. iv, pp. 81–90. 1882.
Canadian. Wisconsin.

St. Peters sandstone, Chamberlin. Geol. of Wis., vol. i, p. 145. 1883.
Silurian. Wisconsin. Included in Ordovician.

St. Peter sandstone, Harrington. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, p. 337. 1884.
Minnesota.

St. Peter sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, pp. 218, 251, 288, 656. 1884.
Minnesota.

St. Peter sandstone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. 10, 39, 75, 28, 63, 88. 1888.
Cambrian. Minnesota.

St. Peters sandstone, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, No. 1, p. 112. 1889.
Lower Silurian. Minnesota.

St. Peter sandstone, Phinney. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 625. 1891.
Silurian. Indiana.

St. Peter sandstone, McGee. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 330. 1891.
Silurian. Iowa.

St. Peter sandstone, Hall and Sardeson. Geol. Soc. Am., Bull., vol. iii, pp. 331, 350. 1892.
Upper Silurian. Minnesota.

St. Peter sandstone, Keyes. Iowa Geol. Surv., vol. i, pp. 24–25. 1893.
Silurian. Iowa.

St. Peters sandstone, James. Cin. Soc. Nat. Hist., Jour., vol. xvii, No. 2, p. 115. 1894.
Ordovician.

St. Peter, Hershey. Am. Geol., vol. xiv, pp. 169, 174. 1894.
Cambrian. Illinois.

St. Peter sandstone, Calvin. Iowa Geol. Surv., vol. iv, pp. 68–73. 1895.
Silurian. Iowa. Included in Ordovician.

St. Peter sandstone, Norton. Iowa Geol. Surv., vol. iii, pp. 180–182. 1895.
Silurian. Iowa.

St. Peter sandstone, Udden. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 837. 1896.
Silurian. Illinois.

St. Peter sandstone, Winchell and Ulrich. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. iii, pt. ii, pl. xxxvii. 1897.
Lower Silurian. Minnesota. Included in Chazy group.

St. Peter sandstone, Gallaher. Mo. Geol. Surv., Bien. Rept., p. 21. 1898.
Silurian (?). Missouri.

St. Peters sandstone, Blatchley and Ashley. Indiana Dept. Geol. and Nat. Res., 22d Ann. Rept., 1897, pp. 16, 17. 1898.
Lower Silurian. Indiana.

St. Peters sandstone, Buckley. Wis. Geol. and Nat. Hist. Surv., Bull. No. iv, Econ. ser., No. 2, pp. 249–254. 1898.
Wisconsin.

St. Peters sandstone, Ashley. Indiana Dept. Geol. and Nat. Res., 23d Ann. Rept., 1898, pp. 74, 77. 1899.
Lower Silurian. Indiana.

St. Peters sandstone, Calvin and Bain. Iowa Geol. Surv., vol. x, p. 400. 1900.
Silurian. Iowa. Included in Ordovician.

St. Stephens, Conrad. Phil. Acad. Nat. Sci., Proc., vol. vii, p. 257. 1856.
Eocene. Mississippi.

St. Thomas sandstone. Mo. Bur. Geol. and Mines, Rept. on Structural and Economic Geology, p. 124. 1900.
Ordovician. Missouri.

Salamanca conglomerate, Carll. 2d Pa. Geol. Surv., Rept. I^4, pp. 203–208. 1883.
Pennsylvania.

Salamanca conglomerate, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1523–1529. 1892.
Devonian. Pennsylvania. Included in Venango.

Salem stone, Gorby. Indiana Dept. Geol. and Nat. Hist., 1886, 15th Ann. Rept., p. 144. 1886.
Carboniferous. Indiana.

Salida schists, Cross. Colo. Sci. Soc., Proc., vol. iv, p. 293. 1893.
Algonkian. Colorado.

Saliferous group, Newberry. Senate Ex. Doc., 36th Cong., 1st sess., Ives's Rept. on Colorado River, p. 106. 1861.
Cretaceous. New Mexico.

Salina period, Dana. Manual of geology. Revised edition, 1864, p. 246.

Salina, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 63, 132. 1873.
Silurian. Ohio.

Salina shale, Winchell. Ohio Geol. Surv., vol. ii, pp. 230, 374. 1874.
Silurian. Ohio.

Salina, Newberry. Ohio Geol. Surv., vol. ii, p. 194. 1874.
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Algonkian. Montana. Included in Belt terrane.

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Carboniferous. Texas. Included in Strawn division.

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Cretaceous. Kansas. Included in Medicine beds.

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Carboniferous. Arkansas. Exact syn. Fayetteville shale.

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Upper Carboniferous. Missouri. Included in Des Moines series.

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Carboniferous. Kansas.

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Silurian. Ohio. Included in Niagara series.

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Silurian. Ohio. Included in Niagara.

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Trias. Included in Red beds.

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Cambrian. Tennessee. Included in Chilhowee series.

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Devonian. Pennsylvania. Included in Catskill.

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Silurian. New York.

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Cambrian. New York.

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Cretaceous. Kansas. Included in Elk Creek beds, Cheyenne sandstone, and Belvidere beds.

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Silurian. Tennessee. Exact syns. Lower Trenton and Black River group.

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Silurian. Tennessee. Included in Central limestone and shale group. Part. syns. Black River and Lower Trenton of New York.

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Cambrian. Massachusetts.

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Devonian. New Jersey.

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Carboniferous. Texas. Included in Coal Measures.

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Carboniferous. Texas. Includes Ricker, Antelope Creek, Indian Creek, Comanche Creek, Wilbarger Creek, Buffalo Creek, Rough Creek, Hanna Valley, Cottonwood Creek, Spring Creek, Brown Creek, Big Valley, Bull Creek, Horse Creek, Fox Ford, Bed No. VIII, Shadrick Mill, Elliott Creek, Burnt Branch, and Lynch Creek beds.

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Carboniferous. Kansas.

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Minnesota.

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Algonkian. Minnesota.

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Archean. Minnesota. Included in Keewatin.

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Algonkian. Michigan. Included in Lower Menominee series.

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Devonian. New York.

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Carboniferous. Pennsylvania. Includes Shenango shale and sandstone, Crawford shale, Sharpsville sandstone.

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Juratrias. Massachusetts. Included in Connecticut River sandstone.

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Cretaceous. Utah.

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Carboniferous. Missouri.

Sumner, Cragin. Colo. Coll. Stud., vol. vi, pp. 3, 9. 1896.
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Alaska. Included in Upper Paleozoic.

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Cretaceous and younger. California.

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Tertiary and Pleistocene. California.

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California.

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Silurian. Pennsylvania. Includes Clinton group.

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Maine.

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Vermont.

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Trias. California. Included in Upper Noric.

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Devonian. Iowa. Included in Chemung.

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Tertiary. Wyoming.

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New Hampshire.

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Paleozoic. New Hampshire.

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Carboniferous. Arkansas. Included in Upper Devonian.

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Silurian. Ohio. Exact syns. Monclova or Holland sandstone.

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New York.

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New York and New England. Includes Black and Taconic slate, Sparry limestone, Magnesian slate, Stockbridge limestone, Granular quartz.

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New York. Included in Taconic system.

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Vermont.

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New York, Massachusetts.

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Vermont.

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Cambrian. New York. Exact syn. Lower Potsdam.

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Silurian. Massachusetts. Included in Hudson River and Trenton.

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Pre-Cambrian. Massachusetts.

Taconic slates, Dana. Am. Jour. Sci., 3d ser., vol. xiv, pp. 202–203. 1877.
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Taconic, Hunt. 2d Pa. Geol. Surv., Rept. E, pp. 43–62. 1878.
Cambrian. Pennsylvania and general.

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Cambrian and Silurian.

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Minnesota. Exact syns. Animike and Huronian.

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Minnesota. Exact syn. Animike.

Taconic, Walcott. U. S. Geol. Surv., Bull. No. 81, p. 242. 1891.
Cambrian.

Taconian, Pumpelly. Geol. Soc. Am., Bull., vol. iv, p. 383. 1893.
Archean(?). Canada(?).

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Cambrian. Minnesota. Included in Animikie.

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Silurian. Missouri.

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Silurian. Iowa. Includes Black River and Birdseye limestone.

Trenton limestone, Whitney. Iowa Geol. Surv., vol. i, pt. i, pp. 287–288, 298–302, 341. 1858.
Silurian. Iowa. Exact syn. Blue limestone.

Trenton limestone, Hall and Whitney. Am. Jour. Sci., 2d ser., vol. xxvii, p. 108. 1859.
Silurian. Iowa.

Trenton limestone, Hitchcock. Geol. of Vt., vol. i, pp. 281–301. 1861.
Paleozoic. Vermont. Included in Trenton period.

Trenton limestone, Marcou. Boston Soc. Nat. Hist., Proc., vol. viii, 1861–62, pp. 241, 242, 249. 1861.
Lower Silurian. Vermont and Canada.

Trenton limestone, Whitney. Rept. on Upper Mississippi lead region, p. 162. 1862.
Silurian. Wisconsin. Exact syn. Blue limestone.

Trenton group, Logan. Can. Geol. Surv., Rept. 1843–63, pp. 136–197. 1863.
Lower Silurian. Canada. Includes Birdseye, Black River, and Trenton formations in New York.

Trenton group, Chapman. Can. Inst., new ser., vol. viii, pp. 196–203. 1863.
Silurian. Canada. Included in Lower Silurian, Ontario group.

Trenton group, Worthen. Ill. Geol. Surv., vol. i, pp. 141–149. 1866.
Silurian. Illinois. Included in Lower Silurian. Includes Galena limestone and Blue and Buff limestone, and Cape Girardeau marble in Missouri.

Trenton group, Bell. Can. Geol. Surv., Rept. 1863–66, pp. 170–171, 1866; Rept. 1866–69, p. 125. 1871.
Silurian. Canada.

Trenton limestone, Freeman. Ill. Geol. Surv., vol. iii, pp. 276–279. 1866.
Silurian. Illinois.

Trenton group, Worthen. Ill. Geol. Surv., vol. i, pp. 141–149. 1866.
Silurian. Illinois. Includes Trenton limestone and Galena limestone.

Trenton limestone, Worthen. Ill. Geol. Surv., vol. iii, pp. 28–29, 118. 1868.
Silurian. Illinois.

Trenton or Lebanon, Safford. Geol. of Tenn., by Safford, pp. 228–290. 1869.
Silurian. Tennessee. Includes Central limestone, Pierce limestone, Ridley limestone, Glade limestone, and Carters Creek limestone (in middle Tennessee).

Trenton group, Bannister. Ill. Geol. Surv., vol. iv, p. 143. 1870.
Silurian. Illinois.

Trenton limestone, Bradley. Ill. Geol. Surv., vol. iv, p. 201. 1870.
Silurian. Illinois.

Trenton group, Worthen. Ill. Geol. Surv., vol. iv, p. 4. 1870.
Silurian. Illinois.

Trenton group, White. Iowa Geol. Surv., vol. i, pp. 174–176. 1870.
Silurian. Iowa. Includes Trenton limestone.

Trenton limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 1st Ann. Rept., pp. 92–104. 1873.
Lower Silurian. Minnesota.

Trenton limestone, Worthen. Ill. Geol. Surv., vol. v, pp. 279–280. 1873.
Silurian. Illinois.

Trenton formation or group, Shaw. Ill. Geol. Surv., vol. v, pp. 86–90, 111–115. 1873.
Silurian. Illinois. Includes Galena, Blue and Buff limestones.

Trenton limestone, Shumard. Mo. Geol. Surv., Rept. 1855–1871, pp. 266, 283, 297, 307. 1873.
Silurian. Missouri.

Trenton limestone, Broadhead. Mo. Geol. Surv., Rept. 1855–1871, p. 49. 1873.
Silurian. Missouri. Included in Lower Silurian. Includes Charrette limestone, and Middle and Lower Trenton.

Trenton, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 59. 1873.
Silurian. Ohio.

Trenton limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 2d Ann. Rept., p. 131. 1874.
Lower Silurian. Minnesota.

Trenton or Lebanon group, Killebrew and Safford. Res. of Tenn., pp. 33–37. 1874.
Silurian. Tennessee. Included in Trenton period.

Trenton group, Broadhead. Mo. Geol. Surv., Rept., 1873–74, p. 29. 1874.
Silurian. Missouri. Includes Trenton, Black River, and Birdseye limestone.

Trenton, Hotchkiss. A Geog. and Political Summary of Va., p. 22. 1876.
Cambrian and Lower Silurian. Virginia. Exact syns. Auroral, Formation II, Rogers.

Trenton limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., pp. 42–49. 1876.
Lower Silurian. Minnesota. Exact syn. Blue limestone.

Trenton limestone, Harrington. Minn. Geol. and Nat. Hist. Surv., 4th Ann. Rept., p. 90. 1876.
Lower Silurian. Minnesota.

Trenton, Smith. Ala. Geol. Surv., Rept. 1875, pp. 25, 99, 111. 1876.
Silurian. Alabama.

Trenton limestone, Irving. Geol. of Wis., vol. ii, pp. 558–562. 1877.
Lower Silurian. Wisconsin.

Trenton limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., 5th Ann. Rept., p. 25. 1877.
Lower Silurian. Minnesota.

Trenton, Ashburner. Am. Phil. Soc., Proc., vol. xvi, pp. 532, 558. 1877.
Silurian. Appalachian region. Part. syn. Matinal in part.

Trenton, Prime. Am. Phil. Soc., Proc., vol. xvi, p. 250. 1877.
Silurian. Pennsylvania. Exact syn. No. 2.

Trenton limestone, Chamberlin. Geol. of Wis., vol. ii, pp. 290–304. 1877.
Lower Silurian. Wisconsin.

Trenton limestone, Prime. 2d Pa. Geol. Surv., Rept. D^2, pp. 57–58. 1878.
Silurian. Pennsylvania.

Trenton limestone, Prime. Am. Jour. Sci., 3d ser., vol. xv, pp. 266–269. 1878.
Silurian. Pennsylvania.

Trenton gravel, Lewis. Phil. Acad. Nat. Sci., Proc., vol. xxxii, pp. 296–309. 1880.
Pleistocene. New Jersey.

Trenton gravel, Hall. 2d Pa. Geol. Surv., Rept. C^6, p. 16. 1881.
Pleistocene. Pennsylvania.

Trenton, Platt. 2d Pa. Geol. Surv., Rept. T, pp. 51–55. 1881.
Silurian. Pennsylvania.

Trenton, McCalley. Ala. Geol. Surv., 1879–1880, pp. 142, 146. 1881.
Silurian. Alabama. Includes Nashville.

Trenton group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, no. 4, pp. 269, 270, 283. 1881.

Trenton, Stevenson. 2d Pa. Geol. Surv., Rept. T^2, pp. 93–94. 1882.
Silurian. Pennsylvania.

Trenton group, Linney. Ky. Geol. Surv. (Proctor), Geol. of Mercer Co., 1882.
Silurian. Kentucky. Includes Siliceous limestone, Blue grass beds, Granular limestones, and Upper Birdseye beds.

Trenton limestone, Linney. Ky. Geol. Surv., Geol. of Garrard Co., p. 13. 1883.
Silurian. Kentucky. Included in Trenton period.

Trenton period, Chamberlin. Geol. of Wis., vol. i, p. 150. 1883.
Silurian. Wisconsin. Included in Lower Silurian, Cambro-Silurian, Ordovician. Includes Hudson River, Galena, Trenton, and St. Peters.

Trenton formation, Chamberlin. Geol. of Wis., vol. i, pp. 151–165. 1883.
Lower Silurian or Cambro-Silurian. Wisconsin. Includes Lower Bluff limestone, Lower Blue limestone, Upper Bluff limestone, and Upper Blue limestone.

Trenton limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, pp. 218, 289, 655. 1884.
Minnesota.

Trenton limestone, Harrington. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. i, pp. 339–343. 1884.
Lower Silurian. Minnesota.

Trenton limestone, Linney. Ky. Geol. Surv. (Proctor), Geol. of Clark and Montgomery Cos., 1884.
Silurian or Cambrian. Kentucky. Included in Trenton period.

Trenton limestone, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. ii, pp. 10, 39, 82, 288, 388. 1888.
Lower Silurian. Minnesota.

Trenton limestone, Hall. Minn. Acad. Nat. Sci., Bull., vol. iii, no. 1, pp. 113–124. 1889.
Lower Silurian. Minnesota.

Trenton group, Miller. N. A. Geol. and Pal., p. 40. 1889.

Trenton limestone, Orton. U. S. Geol. Surv., 8th Ann. Rept., pt. ii, p. 547. 1889.
Silurian. Ohio, Indiana.

Trenton limestone, Orton. Ohio Geol. Surv., 3d Organization, 1st Ann. Rept., pp. 11–14. 1890.
Silurian. Ohio.

Trenton, Smith. Ala. Geol. Surv., Rept. on Cahaba coal field, p. 152. 1890.
Silurian. Alabama. Exact syn. Pelham.

Trenton, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 50. 1890.
Silurian. Arkansas. Includes Maclurea, East Tennessee, Nashville, St. Clair, Izard and Galena, Cincinnati, Birdseye, Hudson River, Black River, Cape Girardeau limestones, and Glens Falls black marble.

Trenton limestone, Orton. Ky. Geol. Surv., Rept. on Petroleum, etc., p. 130. 1891.
Silurian. Kentucky.

Trenton, D'Invilliers. 2d Pa. Geol. Surv., Rept. F^4, pp. 80–82. 1891.
Silurian. Pennsylvania. Exact syn. No. 2.

Trenton limestone, Phinney. U. S. Geol. Surv., 11th Ann. Rept., pt. i, p. 627. 1891.
Silurian. Indiana.

Trenton, McGee. U. S. Geol. Surv., 11th Ann. Rept., pt. ii, p. 329. 1891.
Silurian. Iowa.

Trenton limestone, Keyes. Iowa Geol. Surv., vol. i, pp. 25–26. 1893.
Silurian. Iowa.

Trenton gravel, Salisbury. N. J. State Geol., Ann. Rept., 1892, pp. 106–125. 1893.
Pleistocene. New Jersey.

Trenton, Gibson. Ala. Geol. Surv., Geol. Structure of Murphrees Valley, pp. 25, 92. 1893.
Silurian. Alabama. Exact syn. Pelham.

Trenton limestone, Williams and Clark. Maryland; Its Resources, Industries, and Institutions, pp. 68, 70. 1893.
Silurian. Maryland.

Trenton, Hershey. Am. Geol., vol. xiv, p. 175. 1894.
Silurian. Illinois. Exact. syn. Blue limestone.

Trenton limestone, Cushing. N. Y. State Geol., 13th Ann. Rept., pp. 483–486. 1894.
Silurian. New York.

Trenton group, Darton. N. Y. State Geol., 13th Ann. Rept., pp. 422–429. 1894.
Silurian. New York. Includes Birdseye, Black River, and Trenton limestones.

Trenton limestone, Calvin. Iowa Geol. Surv., vol. iv, pp. 73–80. 1895.
Silurian. Iowa. Included in Ordovician. Exact syn. St. Peter shell limestone.

Trenton limestone, Udden. U. S. Geol. Surv., 17th Ann. Rept., pt. ii, p. 836. 1896.
Silurian. Illinois.

Trenton limestone, Cushing. N. Y. State Geol., 15th Ann. Rept., vol. i, p. 514. 1897.
Silurian. New York.

Trenton limestone, Winchell and Ulrich. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. iii, pt. ii, p. xcii–ci. 1897.
Lower Silurian. Minnesota.

Trenton limestone, Buckley. Wis. Geol. and Nat. Hist. Surv., Bull. No. 4, Econ. ser., no. 2, pp. 270–297. 1898.
Wisconsin.

Trenton, Barlow. Can. Geol. Surv., new ser., vol. x, p. 122I. 1898.
Silurian. Ontario and Quebec.

Trenton formation, White. N. Y. State Mus., 51st Ann. Rept., vol. i, p. r29. 1899.
Ordovician. New York.

Trenton limestone, Calvin and Bain. Iowa Geol. Surv., vol. x, p. 402. 1900.
Silurian. Iowa. Included in Ordovician.

Trenton limestone, Cummings. N. Y. State Mus., Bull., vol. vii, no. 34, p. 424. 1900.
Silurian. New York.

Trincheras division, Dumble. Am. Inst. Mg. Engrs., Trans., vol. xxix, p. 131. 1900.
Tertiary. Mexico.

Trinidad formation, Hills. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 58. 1899.
Cretaceous. Colorado.

Trinidad formation, Hills. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 68. 1900.
Cretaceous. Colorado.

Trinity division, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 116–152, 176, 179. 1888.
Lower Cretaceous. Included in Comanche series.

Trinity division, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, p. lii. 1890.
Cretaceous. Texas. Included in Comanche series.

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Cretaceous. Texas.

Trinity division, Taff. Texas Geol. Surv., 2d Ann. Rept., pp. 715–717. 1891.
Cretaceous. Texas. Included in Lower Cretaceous.

Trinity, White. U. S. Geol. Surv., Bull. No. 82, p. 118. 1891.
Cretaceous. Texas. Exact syn. Dinosaur sands.

Trinity beds, Dumble and Cummins. Am. Geol., vol. ix, p. 349. 1892.
Cretaceous. Texas.

Trinity sand, Taff. Texas Geol. Surv., 3d Ann. Rept., pp. 282–289, 319, 335–336. 1892.
Cretaceous. Texas. Included in Bosque division of Lower Cretaceous.

Trinity division, Hill. Artesian Invest., Final Rept., pt. iii, p. 81, 52d Cong., 1st Sess., Ex. Doc. 41, pt. iii. 1892.
Cretaceous. Southwest. Includes Glen Rose beds, Paluxy sands, Comanche Peak chalk and Caprina limestone. Exact syn. Upper Cross Timber sands.

Trinity sands, Hill. Science, vol. xxii, p. 23. 1893.
Cretaceous. Texas.

Trinity division, Hill. Wash. Biol. Soc., Proc., vol. viii, p. 9. 1893.
Cretaceous. Texas. Included in Comanche series.

Trinity, Drake. Texas Geol. Surv., 4th Ann. Rept., pp. 362–368. 1893.
Cretaceous. Texas.

Trinity division, Hill. Geol. Soc. Am., Bull., vol. v, p. 302. 1894.
Cretaceous. Texas. Includes Glen Rose.

Trinity sands, Hill. Geol. Soc. Am., Bull., vol. v, pp. 297, 303. 1894.
Cretaceous. Texas.

Trinity division, Dumble. Geol. Soc. Am., Bull., vol. vi, p. 378. 1895.
Cretaceous. Texas. Included in Lower Cretaceous.

Trough Creek limestone, White. 2d Pa. Geol. Surv., Rept. T^3, pp. 73–76. 1885.
Carboniferous. Pennsylvania.

Truckee group, King. U. S. Geol. Expl. of 40th Parallel, vol. i, p. 412. 1878
Tertiary. Nevada. Included in Miocene.

Truckee group, White. U. S. Nat. Mus., Proc., vol. v, pp. 99–102. 1882.
Tertiary. California. Included in Miocene. Part. syn. Miocene(?).

Truckee group, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, pp. 282, 285, 313. 1892.
Tertiary. Idaho, Oregon, Nevada. Exact syn. Idaho group.

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Pleistocene. Massachusetts. Included in Glacial, Cape Cod series.

Tuckahoe group, Shaler and Woodworth. U. S. Geol. Surv., 19th Ann. Rept., pt. ii, pp. 423–435. 1899.
Juratrias. Virginia. Included in Newark. Includes Boscabel bowlder beds.

Tucumcari beds, Cummins. Texas Geol. Surv., 3d Ann. Rept., pp. 201–210. 1892.
Cretaceous and Tertiary. Texas.

Tucumcari shale, Cragin. Am. Geol., vol. xvi, p. 381. 1895.
Cretaceous. Kansas. Included in Belvidere beds.

Tule division, Cummins. Texas Geol. Surv., 4th Ann. Rept., pp. 199–200. 1893.
Tertiary. Texas.

Tully limestone, Vanuxem. N. Y. Geol. Surv., 3d Ann. Rept., p. 278. 1839.
Devonian. New York.

Tully limestone, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 300–301, 313. 1839.
Devonian. New York.

Tully limestone, Conrad. Phil. Acad. Nat. Sci., Jour., vol. viii, pp. 229, 232. 1842
Upper Silurian.

Tully limestone, Vanuxem. Geol. of N. Y., pt. iii, pp. 163–167. 1842.
Paleozoic. New York. Included in New York system.

Tully limestone, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 212–215. 1843.
Paleozoic. New York. Included in New York system.

Tully limestone, Emmons. Agric. of N. Y., vol. i, p. 186. 1846.
New York. Included in Erie division of New York system.

Tully limestone, Owen. Am. Jour. Sci., 2d ser., vol. iii, p. 72. 1847.
Devonian. New York. Included in Erie division of New York system.

Tully limestone, Winchell. Ohio Geol. Surv., vol. ii, p. 426. 1874.
Devonian. Ohio.

Tully limestone, Williams. N. Y. State Geol., Rept. for 1886, pp. 13–29. 1887.
Devonian. New York.

Tully limestone, White. 2d Pa. Geol. Surv., Rept. G^6, pp. 109–110. 1882.
Devonian. Pennsylvania. Included in Hamilton.

Tully limestone, Williams. Am. Assoc. Adv. Sci., Proc., vol. xxxv, p. 213. 1887.
Devonian. New York.

Tully limestone, Lesley. 2d Pa. Geol Surv., Final Rept., vol. ii, pp. 1307–1322. 1892.
Devonian. Pennsylvania. Exact syn. No. 8d.

Tully limestone, Prosser. U. S. Geol. Surv., Bull. No. 120, pp. 7, 71, 78. 1894.
Devonian. Pennsylvania, New York. Included in Hamilton.

Tully limestone, Luther. N. Y. State Geol., 13th Ann. Rept., pp. 38–40. 1894.
Devonian. New York.

Tully limestone, Lincoln. N. Y. State Mus., 48th Ann. Rept., pt. ii, pp. 95–97. 1895.
Devonian. New York.

Tully limestone, Lincoln. N. Y. State Geol., 14th Ann. Rept., pp. 95–97. 1895.
Devonian. New York.

Tully limestone, Luther. N. Y. State Geol., 16th Ann. Rept., p. 220. 1899.
Devonian. New York.

Tuna conglomerate, Lesley. 2d Pa. Geol. Surv., Final Rept., vol. ii, pp. 1531–1532. 1892.
Devonian. Pennsylvania. Included in Venango.

Tunnel Point beds, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 340. 1898.
Tertiary. Oregon. Included in Chipolan stage, Oligocene.

Tu-Nunk, Gilbert. U. S. Geog. and Geol. Surv., Rept. on Henry Mts., p. 4. 1877.
Cretaceous. Utah.

Tuscahoma series, Langdon. Ga. Geol. Surv., 1st Rept. of Prog., p. 96. 1891.
Tertiary. Georgia. Exact syn. Bells Landing series.

Tuscahoma, Langdon. Geol. Soc. Am., Bull., vol. ii, pp. 588, 596. 1891.
Tertiary. Alabama. Included in Lower Eocene.

Tuscahoma series, Spencer. Ga. Geol. Surv., 1st Rept. of Prog., p. 27. 1891.
Cretaceous. Georgia. Exact syn. Potomac.

Tuscahoma, Smith, Johnson and Langdon. Ala. Geol. Surv., Geol. of Coastal Plain of Ala., pp. 162, 237, 402, 490. 1894.
Tertiary. Alabama. Included in Eocene, Lignitic. Exact syn. Bells Landing.

Tuscahoma series, Dall. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 346. 1898.
Tertiary. Alabama. Included in Eocene. Exact syn. Bells Landing series.

Tuscaloosa formation, Smith and Johnson. U. S. Geol. Surv., Bull. No. 43, p. 95. 1887.
Cretaceous (?). Alabama.

Tuscaloosa, Langdon. Geol. Soc. Am., Bull., vol. ii, pp. 588, 589. 1891.
Cretaceous. Alabama.

Tuscaloosa series, Langdon. Ga. Geol. Surv., 1st Rept. of Prog., p. 91. 1891.
Tertiary. Georgia.

Tuscaloosa series, Spencer. Ga. Geol. Surv., 1st Rept. of Prog., 1890–91. 1891.
Cretaceous. Georgia. Exact syn. Potomac.

Tuscaloosa, Smith. Ala. Geol. Surv., Bull. No. 2, p. 13. 1892.
Cretaceous. Alabama.

Tuscaloosa, Smith, Johnson and Langdon. Ala. Geol. Surv., Geol. of Coastal Plain of Ala., pp. 14, 307, 362, 433, 454. 1894.
Cretaceous. Alabama.

Tuscaloosa formation, Stanton. Jour. of Geol., vol. v, pp. 592–593. 1897.
Cretaceous. Included in Lower Cretaceous.

Tuscaloosa formation, McCalley. Ala. Geol. Surv., Rept. on Valley regions, pt. ii, pp. 481–487, 506. 1897.
Cretaceous. Alabama.

Tuscan, Diller. U. S. Geol. Surv., 14th Ann. Rept., pt. ii, p. 412. 1894.
Tertiary. California. Included in Neocene.

Tuscan, Diller. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 15. 1895.
California. Included in Neocene.

Tuscan tuff, Turner. U. S. Geol. Surv., 17th Ann. Rept., pt. i, p. 540. 1896.
California.

Tuscarora quartzite, Darton. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 32. 1896.
Silurian. Virginia, West Virginia.

Tuscarora quartzite, Darton and Taff. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 28. 1896.
Silurian. West Virginia, Maryland.

Tuscarora formation, Clark. Md. Geol. Surv., vol. i, p. 181. 1897.
Silurian. Maryland. Exact syn. White Medina sandstone.

Tuscarora, Clark. Md. Geol. Surv., vol. i, p. 157. 1897.
Silurian. Maryland. Part. syn. White Medina.

Tuscarora, Clark. Md. Geol. Surv., vol. ii, pp. 199, 208. 1898.
Silurian. Maryland. Part. syn. White Medina.

Tuscarora quartzite, Darton. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 61. 1899.
Silurian. Virginia, West Virginia.

Tuscarora, Clark. Md. Geol. Surv., vol. iii, p. 99. 1899.
Silurian. Maryland. Part syn. White Medina.

Tuscarora formation, O'Harra. Md. Geol. Surv., Allegany Co., p. 87. 1900.
Silurian. Maryland.

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Carboniferous. Alabama. Exact syn. St. Louis limestone.

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Carboniferous. Alabama. Included in Fort Payne chert.

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Tertiary. Alaska. Included in Miocene or Pliocene.

Tyre sandstone, Diller. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 49. 1898.
Tertiary. Oregon. Included in Eocene.

Tyre sandstone, Smith. Jour. of Geol., vol. viii, p. 463. 1900.
Tertiary. Oregon. Included in Eocene.

Tymochtee slate, Winchell. Ohio Geol. Surv., vol. ii, pp. 399, 407. 1874.
Silurian. Ohio. Included in Niagara.

Tyonek beds, Spurr. U. S. Geol. Surv., 20th Ann. Rept., pt. vii, pp. 171–172, 184. 1900.
Tertiary. Alaska. Included in Neocene.

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Algonkian. Massachusetts. Part. syn. Stamford gneiss.

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Pre-Cambrian. Massachusetts.

Uinta, Powell. U. S. Geog. and Geol. Surv., Geol. of Uinta Mts., pp. 41, 61, 141. 1876.
Paleozoic. Utah.

Uinta group, King. U. S. Geol. Expl. of 40th Parallel, vol. i, p. 405. 1878.
Tertiary. Utah. Included in Eocene.

Uinta group, White. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 19, 20, 22, 37. 1878.
Tertiary. Utah, Colorado. Exact syn. Browns Park group.

Uinta, Cope. U. S. Geol. and Geog. Surv. of Terr., Mon., vol. iii, pp. 12–13. 1881.
Tertiary.

Uinta sandstone, White. U. S. Geol. Surv., 9th Ann. Rept., p. 687. 1889.
Carboniferous or older. Colorado. Exact syn. Weber quartzite.

Uinta, Scott and Osborn. Am. Phil. Soc., Trans., vol. xvi, pp. 462–470. 1890.
Wyoming.

Uinta group, Clark. U. S. Geol. Surv., Bull. No. 83, p. 143. 1891.
Tertiary. Interior region. Included in Eocene.

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Tertiary. Utah. Exact syn. Browns Peak beds.

Uinta beds, Osborn. Am. Mus. Nat. Hist., Bull,, vol. vii, 1895, p. 74. 1895.
Upper Eocene. Exact syn. Browns Peak beds.

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Tertiary. Western United States.

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Tertiary. Western North America. Included in Eocene. Exact. syn. Browns Peak group.

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Devonian. New York. Includes Esopus grit, Schoharie grit, and Onondaga limestone.

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Carboniferous. Pennsylvania. Exact syn. Middle Carboniferous.

Umbral beds, Fontaine. Am. Jour. Sci., 3d ser., vol. xi, pp. 276–279. 1876.
Carboniferous. West Virginia.

Umbral, Stevenson. 2d Pa. Geol. Surv., Rept. K^2, pp. 96–103. 1877.
Carboniferous. Pennsylvania. Included in Lower Carboniferous.

Umbral, Stevenson. Am. Phil. Soc., Proc., vol. xxiv, p. 75. 1887.
Carboniferous. Virginia.

Umpqua formation, Diller. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 49. 1898.
Tertiary. Oregon. Included in Eocene.

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Tertiary. Colorado.

Wasatch, Endlich. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 79, 110, 123. 1878.
Tertiary. Colorado. Included in Eocene.

Wahsatch, White. U. S. Geol. and Geog. Surv. of Terr., 10th Ann. Rept., pp. 19, 20, 22, 35. 1878.
Tertiary. Utah, Colorado. Exact syns. Vermilion Creek and Bitter Creek groups.

Wahsatch, Peale. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., p. 635. 1879.
Tertiary. Wyoming.

Wasatch, Endlich. U. S. Geol. and Geog. Surv. of Terr., 11th Ann. Rept., pp. 88, 127. 1879.
Tertiary. Wyoming.

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Tertiary. Includes Green River.

Wasatch sandstone, Dutton. U. S. Geol. Surv., 6th Ann. Rept., pp. 136–140. 1885.
Tertiary. New Mexico.

Wasatch, White. U. S. Geol. Surv., Bull. No. 34, pp. 9–19 1886.
Tertiary. Utah. Included in Eocene.

Wasatch, Clark. U. S. Geol. Surv., Bull. No. 83, p. 139. 1891.
Tertiary. Interior region. Included in Eocene.

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Eocene.

Wasatch, Scott. Geol. Soc. Am., Bull., vol. v, p. 595. 1894.
Tertiary. Nebraska.

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Tertiary. Utah. Exact syn. Coryphodon beds.

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Eocene. Exact syn. Coryphodon beds.

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Tertiary. Colorado.

Wasatch formation, Smith. Jour. of Geol., vol. viii, pp. 449–450. 1900.
Tertiary. Western North America. Included in Eocene.

Wakarusa limestone, Beede. Kan. Acad. Sci., Trans., vol. xv, p. 30. 1898.
Carboniferous. Kansas.

Walden sandstone, Hayes. Ala. Geol. Surv., Bull. No. 4, p. 49. 1892.
Carboniferous. Alabama. Included in Coal Measures.

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Carboniferous. Georgia, Tennessee, Alabama.

Walden sandstone, Hayes. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 35. 1896.

Carboniferous. Alabama. Exact syns. Upper and Lower Coal Measures of Smith. 1878.

Waldo formation, Dall, Stanley-Brown. Geol. Soc. Am., Bull., vol. v, p. 166. 1894.

Tertiary. Florida.

Waldrip coal division, Tarr. Am. Geol., vol. vi, p. 151. 1890.

Carboniferous. Texas. Included in Upper Carboniferous.

Waldrip-Cisco, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, p. lxvii. 1890.

Carboniferous. Texas. Included in Coal Measures.

Waldrip bed, Drake. Texas Geol. Surv., 4th Ann. Rept., pp. 412–416. 1893.

Carboniferous. Texas. Included in Cisco division.

Waldron shale, Elrod. Indiana Dept. Geol. and Nat. Hist., 12th Ann. Rept., 1882, p. 109. 1883.

Silurian. Indiana.

Waldron beds, Foerste. Denison Univ. Sci. Lab., Bull., vol. iii, p. 8. 1888.

Indiana.

Waldron shale, Elrod. Indiana Dept. Geol. and Nat. Hist., 13th Ann. Rept., 1883, pp. 93, 95. 1894.

Upper Silurian. Indiana.

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Silurian. Indiana.

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Upper Silurian. Indiana.

Waldron sandstone, Gallager. Mo. Geol. Surv., Bien. Rept., p. 52. 1898.

Upper Carboniferous. Missouri. Included in Upper Coal Measures.

Waldron shale, Foerste. Indiana Dept. Geol. and Nat. Res., 22d Ann. Rept. (1897), pp. 197, 207, 214. 1898.

Upper Silurian. Indiana.

Waldron shale, Price. Indiana Dept. Geol. and Nat. Res., 24th Ann. Rept., pp. 81–143. 1900.

Silurian. Indiana. Included in Upper Silurian.

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Devonian. Virginia. Part. syn. Hamilton.

Wallala, White. U. S. Geol. Surv., Bull. No. 82, p. 192. 1891.

Cretaceous. Pacific Coast. Included in Upper Cretaceous.

Wallala beds, Fairbanks. Am. Jour. Sci., 3d ser., vol. xlv, pp. 473–478. 1893.

Cretaceous. California.

Wallala formation, Stanton. Geol. Soc. Am., Bull., vol. iv, p. 253. 1893.

Cretaceous. California. Included in Chico.

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Cretaceous. California.

Wallala division, Emmons and Merrill. Geol. Soc. Am., Bull., vol. v, p. 490. 1894.

Cretaceous. Mexico.

Wallala beds, Diller and Stanton. Geol. Soc. Am., Bull., vol. v, p. 455. 1894.

Cretaceous. California. Included in Chico.

Wallkill limestone, Wolff and Brooks. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, pp. 443–454. 1898.

Cambrian. New Jersey.

Walnut clays, Hill. Geol. Soc. Am., Bull., vol. ii, pp. 503, 512. 1891.
Cretaceous. Texas. Included in Fredericksburg division.

Walnut clay, Hill. Artesian Invest., Final Rept., pt. iii, p. 86, 52d Cong., 1st sess., Ex. Doc., 41, pt. iii. 1892.
Cretaceous. Texas. Included in Trinity division.

Walnut clays, Hill. Geol. Soc. Am., Bull., vol. v, pp. 297, 303. 1894.
Cretaceous. Texas. Included in Comanche peak beds, Fredericksburg division.

Walnut formation, Hill and Vaughan. U. S. Geol. Surv., 18th Ann. Rept., pt. ii, p. 226. 1898.
Cretaceous. Texas. Included in Fredericksburg division of Comanche series.

Wamsutta group, Shaler, Woodworth and Foerste. U. S. Geol. Surv., Mon., vol. xxxiii, pp. 141–158. 1899.
Carboniferous. Rhode Island.

Wanswangoning quartzite, Winchell. Minn. Geol. and Nat. Hist. Surv., Final Rept., vol. iv, p. 508. 1899.
Cambrian. Minnesota. Included in Animikie.

Wapiti River sandstones, Dawson. Can. Geol. Surv., Rept., 1879–1880, pp. 115B, 122B–127B. 1881.
Cretaceous. British Columbia. Included in Fox Hill and Laramie. Exact syns. Upper sandstones and shales.

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Cretaceous. Canada. Exact syns. Fox Hill and Laramie.

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Laramie. Canada.

Wappinger Valley limestone, Dwight. Am. Jour. Sci., 3d ser., vol. xvii, pp. 389–392. 1879.
New York.

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Silurian. New York. Exact syn. Barnegat limestone.

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Silurian. New York.

Wappinger, Dwight. Am. Assoc. Adv. Sci., Proc., vol. xxxi, p. 384. 1883.
Silurian. New York. Exact syn. Barnegat.

Wappinger Valley limestone, Dwight. Am. Jour. Sci., 3d ser., vol. xxxi, pp. 125–132. 1886.
Silurian. New York. Exact syn. Barnegat limestone.

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Cambrian and Silurian. New York.

Wappinger Valley limestone, Dwight. Am. Jour. Sci., 3d ser., vol. xxxviii, pp. 139–143. 1889.
Cambrian. New York.

Wappinger limestone, Darton. N. Y. State Geol., 13th Ann. Rept., p. 311. 1894.
Cambrian. New York.

Wapsipinicon stage, Norton. Iowa Geol. Surv., vol. iv, p. 155. 1895.
Devonian. Iowa. Includes Upper and Lower Davenport, Kenwood, and Otis.

Wapsipinicon, Norton. Iowa Geol. Surv., vol. ix, p. 440. 1899.
Devonian. Iowa. Includes Independence and Davenport.

Warren County sandstone, Gorby. Indiana Dept. Geol. and Nat. Hist., 15th Ann. Rept., 1886, p. 86. 1886.
Indiana.

Warren oil group, Carll. 2d Pa. Geol. Surv., Rept. I^5, pp. 131–132. 1890.
Devonian. Pennsylvania.

Warren stage, Upham. Am. Geol., vol. xvi, p. 105. 1895.
Pleistocene. Included in Champlain epoch.

Warrensburg sandstone, Winslow. Mo. Geol. Surv., Sheet Rept. No. 1, pp. 22, 45–54. 1892.
Upper Carboniferous. Missouri. Included in Upper Coal Measures.

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Carboniferous. Missouri.

Warrensburg sandstone, Winslow. Mo. Geol. Surv., vol. ix, Sheet Rept. No. 1, p. 45. 1896.
Carboniferous. Missouri. Included in Coal Measures.

Warrensburg sandstone, Marbut. Mo. Geol. Surv., vol. xii, pt. ii, pp. 123, 210, 275. 1898.
Upper Carboniferous. Missouri. Included in Missourian series.

Warsaw, Hall. Am. Assoc. Adv. Sci., Proc., vol. x, p. 56. 1856.
Carboniferous. Mississippi Valley. Exact syn. Second Archimides.

Warsaw limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, p. 407. 1857.
Lower Carboniferous. Missouri. Included in Mountain limestone. Exact syn. Second Archimides limestone.

Warsaw limestone, Hall. Iowa Geol. Surv., vol. i, p. 97. 1858.
Carboniferous. Iowa. Exact syn. Second Archimides limestone.

Warsaw limestone, Worthen. Iowa Geol. Surv., vol. i, p. 192. 1858.
Carboniferous. Iowa.

Warsaw limestone, Hall. Albany Inst., Trans., vol. iv, pp. 2–3. 1864.
Carboniferous. Mississippi Valley. Exact syns. Second Archimides limestone, Magnesian limestone.

Warsaw limestone, Engelmann. St. Louis Acad. Sci., Trans., vol. ii, p. 189. 1868.
Lower Carboniferous. Illinois.

Warsaw beds, Worthen. Ill. Geol. Surv., vol. v, p. 276. 1873.
Carboniferous. Illinois. Included in St. Louis limestone.

Warsaw limestone, Broadhead. Mo. Geol. Surv., Rept., 1873–74, p. 184. 1874.
Carboniferous. Missouri. Included in St. Louis group.

Warsaw group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. 4, p. 275. 1881.
Carboniferous.

Warsaw limestone, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 55. 1890.
Carboniferous. Arkansas. Included in Lower Carboniferous. Exact syn. St. Louis.

Warsaw, Keyes. Geol. Soc. Am., Bull., vol. iii, pp. 286, 293, 298. 1892.
Lower Carboniferous. Missouri. Included in St. Louis and Osage groups.

Warsaw, Keyes. Mo. Geol. Surv., vol. iv, pp. 30, 76. 1894.
Lower Carboniferous. Missouri. Included in Augusta stage (part).

Warsaw, Keyes. Mo. Geol. Surv., vol. vii, pt. ii, p. 390. 1894.
Lower Carboniferous. Missouri. Included partly in St. Louis stage, partly in Augusta stage.

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Carboniferous. Iowa.

Warsaw shale and limestone, Gordon. Iowa Geol. Surv., vol. iv, pp. 213–214. 1895.
Carboniferous. Iowa.

Washakie, Peale. U. S. Geol. and Geog. Surv. of Terr., 8th Ann. Rept., p. 146. 1876.
Tertiary. Rocky Mountains.

Washakie beds, Dall and Harris. U. S. Geol. Surv., Bull. No. 84, p. 337. 1892.
Tertiary. Wyoming.

Washburn sandstone, Stevenson. N. Y. Geol. Acad. Sci., Trans., vol. xv, p. 51. 1896.

Carboniferous. Arkansas. Included in Appleton stage.

Wartburg sandstone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 33. 1896.

Carboniferous. Tennessee. Part. syn. Walden sandstone.

Wartburg sandstone, Keith. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 40. 1897.

Carboniferous. Tennessee. Part. syn. Walden sandstone.

Washington County group, Stevenson. 2d Pa. Geol. Surv., Rept. K, pp. 44–56. 1876.

Carboniferous. Pennsylvania. Included in Upper Barren Measures.

Washington County group, Lesley. 2d Pa. Geol. Surv., Rept., H^3, p. xxiii, 1877.

Washington County group, D'Invilliers. 2d Pa. Geol. Surv., Ann. Rept., 1886, pp. 59–60. 1887.

Carboniferous. Pennsylvania. Included in Upper Barren Measures.

Washington shale and sandstone, Simonds. Ark. Geol. Surv., 1888, vol. iv, pp. 75–82, 151. 1888.

Carboniferous. Arkansas. Included in Lower Carboniferous.

Washington or High Bluff greensand, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 72–75. 1888.

Cretaceous. Arkansas. Included in Upper Arenaceous beds.

Washington sandstone, White. U. S. Geol. Surv., Bull. No. 65, p. 38. 1891.

Carboniferous. Pennsylvania, West Virginia. Included in Permo-Carboniferous, Dunkard Creek.

Washington limestone, White. U. S. Geol. Surv., Bull. No. 65, pp. 35–36. 1891.

Carboniferous. Pennsylvania and West Virginia. Included in Permo-Carboniferous, Dunkard Creek. Includes Upper, Middle, and Lower Washington limestones.

Washington gneiss, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Hawley sheet. 1892.

Algonkian. Massachusetts. Part. syn. Stamford gneiss.

Washington, Hill. Geol. Soc. Am., Bull., vol. v, p. 302. 1894.

Cretaceous. Texas. Included in Glanconitic division.

Washington shale, Drake. Am. Phil. Soc., Proc., vol. xxxvi, p. 354. 1897.

Carboniferous. Indian Territory. Included in Boston group of Lower Cretaceous.

Washington gneiss, Emerson. U. S. Geol. Surv., Mon., vol. xxix, pl. xxxiv, p. 20. 1898.

Pre-Cambrian. Massachusetts.

Washington gneiss, Emerson. U. S. Geol. Surv., Geol. Atlas of U. S., Folio No. 50. 1898.

Algonkian. Massachusetts.

Washington limestone, Richardson. Am. Assoc. Adv. Sci., Proc., vol. xlvii, pp. 295–296. 1898.

Silurian. Vermont. Included in Trenton.

Washington gneiss, Emerson. U. S. Geol. Surv., Bull. No. 159, p. 34. 1899.

Pre-Cambrian. Massachusetts.

Washita limestone, Shumard. St. Louis Acad. Sci., Trans., vol. i, pp. 583, 586. 1857.

Cretaceous. Texas.

Washita limestone, Marcou. Boston Soc. Nat. Hist., Proc., vol. viii, 1861–62, p. 89. 1861.

Cretaceous. Texas. Included in Upper Cretaceous (Lower Cretaceous, according to Marcou).

Washita division, White. Phil. Acad. Nat. Sci., Proc., 1887, p. 40. 1887.
Cretaceous. Texas. Included in Comanche series.

Washita division, Hill. Ark. Geol. Surv., 1888, vol. ii, pp. 111–113, 179–180. 1888.
Cretaceous. Arkansas. Included in Lower Cretaceous or Comanche series.

Washita division, Dumble. Texas Geol. Surv., 1st Ann. Rept., pl. iii, pp. i–li. 1890.
Cretaceous. Texas. Included in Comanche series.

Washita division, Hill. Texas Geol. Surv., 1st Ann. Rept., pp. 126–130. 1890.
Cretaceous. Texas. Included in Comanche series. Includes Shoal Creek limestone, Exogyra Arietna clay, Washita or Fort Worth limestone, Caprotina beds.

Washita division, Taff. Texas Geol. Surv., 2d Ann. Rept., pp. 719–732. 1891.
Cretaceous. Texas. Included in Lower Cretaceous. Includes Caprotina, Arietna, Malone, Etholen, Yucca Bluff, Quitman, and Mountain beds.

Washita division, Hill. Geol. Soc. Am., Bull., vol. ii, pp. 503, 515–518. 1891.
Cretaceous. Texas. Includes Denison beds, Fort Worth limestone, Duck Creek limestone, and Kiamitia clays.

Washita division, Hill. Artesian Invest., Final Rept., pt. iii, p. 88, 52d Cong., 1st sess., Ex. Doc. 41, pt. iii. 1892.
Cretaceous. Southwest. Includes Denison beds. Exact syn. Indian Territory division.

Washita division, Taff. Texas Geol. Surv., 3d Ann. Rept., pp. 276–277. 1892.
Cretaceous. Texas. Includes Vola limestone, Arietna clay, Denison, and Fort Worth.

Washita, Dumble and Cummins. Am. Geol., vol. xii, p. 310. 1893.
Cretaceous. Texas.

Washita division, Taff. Texas Geol. Surv., 4th Ann. Rept., pp. 262–283. 1893.
Cretaceous. Texas. Included in Lower Cretaceous. Includes Vola limestone, Exogyra Arietina clay, Fort Worth limestone, and Denison marl.

Washita stage, Dumble. Geol. Soc. Am., Bull., vol. vi, p. 377. 1895.
Cretaceous. Texas. Included in Lower Cretaceous.

Wassonville limestone, Bain. Am. Geol., vol. xv, p. 322. 1895.
Carboniferous. Iowa. Included in Mississippian series, Kinderhook.

Wassonville limestone, Bain. Iowa Geol. Surv., vol. v, p. 134. 1896.
Carboniferous. Iowa. Included in Kinderhook.

Water lime, Gebhard. Am. Jour. Sci., 1st ser., pp. 172–177. 1835.
New York.

Water lime, Vanuxem. N. Y. Geol. Surv., 3d Ann. Rept., pp. 272–274. 1839.
Silurian. New York.

Water-lime series, Hall. N. Y. Geol. Surv., 3d Ann. Rept., pp. 292, 306. 1839.
Silurian. New York.

Water-lime group, Vanuxem. Geol. of N. Y., pt. iii, pp. 110–116. 1842.
Paleozoic. New York. Included in New York system. Includes Water-lime group, Hydraulic limerock. Part. syn. No. vi, Pennsylvania Survey.

Water-lime group, Mather. Geol. of N. Y., pt. i, pp. 349–352. 1843.
Paleozoic. New York. Included in Helderberg division. Includes Hydraulic limestone, No. vi, Rogers.

Water-lime group, Hall. Geol. of N. Y., pt. iv, 4th Geol. Dist., pp. 18, 141–143. 1843.
Paleozoic. New York. Includes Water-lime group, Water-lime rock (?). Tentaculite limestone.

Water-lime group or (Manlius Water lime), Owen. Am. Jour. Sci., 2d ser., vol. i, p. 47. 1846.
Silurian. New York. Included in Helderberg series of the New York system. Part. syn. part of No. vi, Pennsylvania Survey.

Water lime, Cook. Geol. of N. J., pp. 155–157. 1868.
Silurian. New Jersey.

Water lime, Winchell. Ohio Geol. Surv., vol. i, pt. i, pp. 599, 617, 632, 642. 1873.
Silurian. Ohio.

Water lime, Gilbert. Ohio Geol. Surv., vol. i, pt. i, p. 575. 1873.
Silurian. Ohio.

Water lime, Newberry. Ohio Geol. Surv., vol. i, pt. i, p. 135. 1873.
Silurian. Ohio.

Water lime, Newberry. Ohio Geol. Surv., vol. ii, p. 193. 1874.
Silurian. Ohio.

Water lime, Winchell. Ohio Geol. Surv., vol. ii, pp. 230, 301, 317, 329, 374, 388, 399. 1874.
Silurian. Ohio.

Water lime, Ashburner. Am. Phil. Soc. Proc., vol. xvi, pp. 530, 555. 1877.
Silurian. Appalachian region. Exact syn. Scalent.

Water lime group, Miller. Cin. Soc. Nat. Hist., Jour., vol. iv, No. 4, p. 274. 1881.

Water lime group, Tiffany. Sci., vol. ii, p. 323. 1883.
Silurian. Iowa.

Water lime, Tiffany. Am. Assoc. Adv. Sci., Proc., vol. xxxii, p. 246. 1884.
Silurian. Iowa.

Water lime group, Hopkins. Ark. Geol. Surv., 1890, vol. iv, p. 52. 1890.
Silurian. Arkansas. Included in Silurian group. Part syn. Lower Helderberg.

Water lime formation, Luther. N. Y. State Geol., 16th Ann. Rept., p. 211. 1899.
Silurian. New York.

Waterloo quartzite, Chamberlin. Geol. of Wis., vol. ii, pp. 252–256. 1877.
Archean. Wisconsin.

Waterville slates, Hitchcock. Rept. on Geol. of Maine, 1861, p. 232. 1861.
Lower Silurian.

Watts Creek bed, Drake. Texas Geol. Surv., 4th Ann. Rept., p. 419. 1893.
Carboniferous. Texas. Included in Cisco division.

Waukesha beds, Chamberlin. Geol. of Wis., vol. ii, pp. 357–360. 1877.
Upper Silurian. Wisconsin. Included in Niagara.

Waukesha beds, Chamberlin. Geol. of Wis., vol. i, p. 187. 1883.
Silurian. Wisconsin. Included in Niagara.

Waverly sandstone series, Mather. Am. Jour. Sci., 1st ser., vol. xxxiv, p. 356. 1838.
Ohio.

Waverly sandstone series, Briggs. Ohio Geol. Surv., 1st Ann. Rept., by W. W. Mather, p. 79. 1838.
Corboniferous. Ohio.

Waverly sandstone, Owen. Geol. Reconn. Indiana, 2d Rept., 1838, pp. 37, 44. 1839.

Waverly rock, Owen. Geol. Reconn. Indiana, Rept., 1838, pt. ii, p. 59. 1859.
Carboniferous. Ohio. Exact syn. Soft freestone of the knobs (Knob-stone group) of Indiana.

Waverly group, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 28. 1870.
Carboniferous. Ohio. Includes Cuyahoga shale, Berea grit, Bedford shale, and Cleveland shale.

Waverly sandstone, Newberry. Ohio Geol. Surv., Rept. Prog., 1869, p. 21. 1870.
Carboniferous. Ohio.

Waverly black slate, Andrews. Ohio Geol. Surv., Rept. Prog., 1869, p. 66. 1870.
Ohio.

Waverly sandstones, Andrews. Ohio Geol. Surv., Rept. Prog., 1869, pp. 61, 65. 1870.
Ohio.

Waverly Sandstone group, Andrews. Ohio Geol. Surv., Rept. Prog., 1870, p. 59. 1871.
Ohio.

Waverly sandstone, Andrews. Ohio Geol. Surv., Rept., 1869, p. 67. 1871.
Ohio.

Waverly group, Read. Ohio Geol. Surv., Rept. Prog., 1870, p. 474. 1871.
Ohio.

Waverly group, Newberry. Ohio Geol. Surv., Rept., 1869, p. 21. 1871.
Carboniferous. Ohio. Includes Cuyahoga shale, Berea grit, Bedford shale, and Cleveland shale.

Waverly, Andrews. Ohio Geol. Surv., vol. i, pt. i, p. 345. 1873.
Carboniferous. Ohio.

Waverly, Newberry. Ohio Geol. Surv., vol. i, pt. i, pp. 185, 208. 1873.
Carboniferous. Ohio. Includes Cuyahoga shale, Berea grit, and Bedford and Cleveland shales.

Waverly, Newberry. Ohio Geol. Surv., vol. ii, pp. 84–99. 1874.
Carboniferous. Ohio. Included in Lower Carboniferous. Includes Cuyahoga shale, Berea grit, Bedford shale and Cleveland shale.

Waverly, Andrews. Ohio Geol. Surv., vol. ii, pp. 589, 593. 1874.
Carboniferous. Ohio.

Waverly, Orton. Ohio Geol. Surv., vol. ii, pp. 618, 648. 1874.
Carboniferous. Ohio. Included in Subcarboniferous.

Waverly group, Rominger. Mich. Geol. Surv., vol. iii, pt. i, p. 69. 1876.
Carboniferous. Michigan. Includes Winchells, Marshall group, and part of his Huron group. Exact syn. Waverly group of Ohio.

Waverly, Shaler. Ky. Geol. Surv., new ser., vol. iii, pp. 175–178. 1877.
Carboniferous. Kentucky. Exact syn. Siliceous group.

Waverly group, Hicks. Am. Jour. Sci., 3d ser., vol. xvi, pp. 216–224. 1878.
Carboniferous. Ohio. Includes Licking shales, Black Hand conglomerate, Granville beds, Raccoon shales, Sunbury slate, etc.

Waverly conglomerate, Read. Ohio Geol. Surv., vol. iii, pp. 317, 337, 523, 545, 816. 1878.
Carboniferous. Ohio.

Waverly, Hodge. Ohio Geol. Surv., vol. iii, p. 564. 1878.
Carboniferous. Ohio.

Waverly, Orton. Ohio Geol. Surv., vol. iii, p. [illegible]58. 1878.
Carboniferous. Ohio.

Waverly, Newberry. Ohio Geol. Surv., vol. iii, pp. 19, 763. 1878.
Carboniferous. Ohio.

Waverly, Orton. Am. Jour. Sci., 3d ser., vol. xviii, pp. 138–139. 1879.
Carboniferous. Ohio.

Waverly, Orton. Am. Assoc. Adv. Sci., Proc., vol. xxx, pp. 167–174. 1882.
Carboniferous. Ohio. Included in Subcarboniferous. Includes Bedford shale, Berea grit, Berea shale=Waverly black shale, Cuyahoga shale, Logan group, and Maxville limestone.

Waverly, Hall. Am. Assoc. Adv. Sci., Proc., vol. xxxiii, pt. ii, p. 419. 1885.
Carboniferous. New York and Pennsylvania.

Waverly series, Orton. Ohio Geol. Surv., Prelim. Rept. Petroleum and Inflammable Gas, p. 24. 1886.
Ohio. Includes Logan series, Cuyahoga shale, Berea shale, Berea grit, and Bedford shale.

Waverly group, Herrick. Denison Univ. Sci. Lab., Bull., vol. ii, p. 7. 1887.
Ohio.

Waverly group, Orton. Ohio Geol. Surv., Rept., vol. vi, pp. 3, 33. 1888.
Carboniferous. Ohio. Includes Logan group, Cuyahoga shale, Berea shale, Berea grit, and Bedford shale.

Waverly group, Herrick. Denison Univ. Sci. Lab., Bull., vol. iii, pp. 13, 23, 101. 1888.
Ohio.

Waverly group, Herrick. Denison Univ. Sci. Lab., Bull., vol. iv, p. 97. 1888.
Ohio. Includes Cuyahoga or Waverly series, and Berea or Transition series.

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Devonian (?). Alaska.

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Silurian. Ohio. Included in Niagara series.

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Silurian. Colorado.

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Tertiary. Georgia. Included in Eocene.

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Tertiary. Alabama. Included in Eocene. Includes Coral limestone, Vicksburg, and Jackson.

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Tertiary. Arkansas. Included in Claibornian stage, Eocene.

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Eozoic. New Hampshire.

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Tertiary.

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Tertiary.

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Tertiary.

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Tertiary. Wyoming. Included in Miocene.

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Tertiary.

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Tertiary. Nebraska. Part. syn. Oligocene.

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Cambrian. Missouri. Included in Ozark series. Includes Joachim limestone, Crystal City sandstone, Potosi limestone, St. Joseph limestone, La Motte sandstone, and Iron Mountain conglomerate. Part. syn. Gasconade limestone.

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Carboniferous. Texas. Included in Permian.

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Permian. Texas. Part. syn. Dunkard Creek.

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Carboniferous. Texas. Included in Permian.

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Carboniferous. Texas. Included in Strawn division.

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Tertiary. Oregon. Included in Eocene.

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Tennessee, North Carolina. Included in Ocoee group.

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Indiana.

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Lower Eocene. Texas. Included in Lignitic. Exact syn. Midway.

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Tertiary. North Carolina. Included in Claibornian stage, Eocene.

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Tertiary. Dakota, Nebraska.

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Tertiary.

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Tertiary.

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Tertiary. Wyoming.

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Tertiary.

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Tertiary. Wyoming. Exact syn. Green River.

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Juratrias. N. W. New Mexico. Included in Trias.

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Cambro-Silurian. Canada.

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New Hampshire.

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Arkansas.

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Carboniferous. Missouri. Included in Missourian series, Bethany limestone.

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Manzanilla.
Maple Hill.
Mapleton.
Maquethian.
Maquoketa.
Marais des Cygnes.
Marble.
Marble Canyon.
Marble Hill.
Marcellus.
Mareniscan.
Marietta.
Marine.
Marion.
Mariposa.
Marks Mills.
Marksburg.
Marl.
Marl Brook Columbus.
Marlborough.
Marmaton.
Maroon.
Marquette.
Marquette-Menominee.
Marquettian.
Marseilles.
Marsh.
Marsh Creek.
Marshall.
Marshalltown.
Marsouin.
Martinez.
Martinsburg.
Maruga.
Marvin Creek.
Marylandinian.
Maryville.
Mascarene.
Mason.
Massanutten.
Massillon.
Masuk.
Matanuska.
Matanzas.
Matawan.
Matinal.
Matthews Landing.
Mauch Chunk.
Maxville.
May Pen.
Mayville.
Meade.
Meadeville.
Meagher.
Medicine.
Medicine Lodge.
Medina.
Meekoceras.
Megalonyx.
Mendon.
Mendota.
Menevian.
Meniscus.
Menominee.
Mentor.
Merced.
Mercer.
Meridian.
Merom.
Merrimack.
Mertgomist.
Mesa.
Mesa Verde.
Mesabi.
Mesnard.
Michigamme.
Michigan salt.
Middleboro.
Middle Conglomerate.
Middle Park.
Middleton.
Midland.
Midway.
Midwayan.
Mifflintown.
Milburn.
Milburn-Strawn.
Miliolite.
Mill Creek.
Miller.
Millers River.
Millsap.
Millstone.
Milton.
Minbo.
Mineral King.
Minne-Lusa.
Minnesota River Valley.
Mionippus.
Mispec.
Mission Creek.
Mississippian.
Missouri.
Missourian.
Mitchell.
Moberly.
Mobile.
Moccasin.
Moduria.
Mohawk.
Mohawkian.
Mohegan.
Mojair.
Mojave.
Momable.
Mona.
Monarch.
Monclova.
Moneague.
Monmouth.
Monongahela River.
Monroe.

Monroe-Harrison.
Monson.
Mont Alto.
Montalban.
Montana.
Monte de Oro.
Monteballo.
Montego.
Monterey.
Montevallo.
Montgomery.
Montpelier.
Montrose.
Monument Creek.
Moodys Branch.
Moose Hide.
Moose Island.
Moose River.
Moreau.
Morgantown.
Mormon.
Morrison.
Moruga.
Moscow.
Mott Haven.
Mottled.
Mound Valley.
Mount Holly.
Mount Mesnard.
Mount Morris.
Mount Pleasant.
Mount Sand.
Mount Selman.
Mount Toby.
Mount Vernon.
Mount Washington.
Mountain.
Murray.
Mussel-bearing.
Myrick.
Myrtle.
Mytilus.
Naheola.
Naknek.
Nampa.
Nanafalia.
Nanaimo.
Naparima.
Naples.
Napoleon.
Nariva.
Nashaquitsa.
Nashville.
Nasina.
Natick.
Navarro.
Navasota.
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Nebo.
Nebraska.
Necedah.
Nechacco.
Neeleytown.
Negaunee.
Nehant.
Neihart.
Neocomian.
Neodesha.
Neosho.
Nerinaea.
Neudeckian.
Nevada.
New Albany.
New Glasgow.
New Milford.
New Providence.
New Red.
New Richmond.
New River.
New Scotland.
New Ulm.
New York.
Newark.
Newland.
Newman.
Newport.
Newport Neck.
Newtonville.
Niagara.
Niagaran.
Nichols.
Nicola.
Nicollet.
Nilkoko.
Nineveh.
Niobrara.
Nipigon.
Nisconleth.
Nishuabotany.
Nodaway.
Nolichucky.
Noix.
Norian.
Normandy.
Norristown.
North Denison.
North Park.
North Valley Hill.
North Vernon.
Norton.
Novaculite.
Nulato.
Nummulite.
Nunda.
Nushagak.
Nussbaum.
Nutzotin.
Oak Creek.
Oak Grove.
Oakland.
Oakville.
Ocala.
Oceanic.
Ocheesee.
Ocoee.
Ocoya Creek.
Odanah.
Ogden.
Ogishke.
Ohio.
Ohio Creek.
Oil Creek Lake.
Oil Lake.
Oklune.
Olean.
Olentangy.
Old Red.
Olive.
Oneida.
Oneonta.
Onondaga.
Ontaric.
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Ontario.
Oostanala.
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Orange Martin.
Orange sand.
Orangeburg.
Orangeville.
Orbitoides.
Orbitoitic.
Orbitolite.
Orca.
Orchard.
Oread.
Oreodon.
Oriskany.
Orthaulax.
Orting.
Osage.
Osage City.

Osborne.
Osceola.
Osgood.
Ostrea sellaeformis.
Oswegatchie.
Oswegan.
Oswego.
Ottawa.
Otis.
Otter.
Otter Creek.
Otterdale.
Ouray.
Oxmoor.
Ozark.
Ozarkian.
Packer.
Packsaddle.
Paine.
Paint Rock.
Palisades.
Palmer.
Palo Duro.
Paluxy.
Pamunkey.
Panama.
Panola.
Panther Creek.
Para.
Parian.
Park.
Parks Mountain.
Parma.
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Pascagoula.
Paskapoo.
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Patapsco.
Patoot.
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Paupack.
Paw Paw.
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Pawnee.
Pawtucket.
Payette.
Peace Creek.
Peach Bottom.
Pearl River.
Pearlette.
Pedee.
Pelham.
Pelican.
Pella.
Pelodian.
Pemigewasset.
Pendleton.
Pennian.
Pennington.
Pennsylvania.
Penokee.
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Pensauken.
Pentacrimus.
Pentamerua.
Pentremital.
Peorian.
Pepino.
Pequawket.
Perkasic.
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Pescadero.
Pewabic.
Phelps.
Philadelphia.
Phillipsburg.
Phipsburg.
Pickens.
Pictou.
Pictured Cliff.
Piedmont.
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Pigeon.
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Pilot Knob.
Pine Creek.
Pine Mountain.
Pink Cliff.
Pinnacle.
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Plattsburgh.
Plattsmouth.
Pleasanton.
Pleurocoelus.
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Plymouth.
Pocahontas.
Pochuck.
Pocono.
Pogonip.
Point aux Gres.
Point of Rocks.
Point Pleasant.
Pointe Levis.
Poison Canyon.
Pokegama.
Polk Bayou.
Polk County.
Pomeroy.
Ponderosa.
Pondville.
Ponent.
Pope Hollow.
Porcupine.
Porphyrian.
Port Hudson.
Portage.
Porters Creek.
Portland.
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Postmedidial.
Postmeridian.
Poteau.
Potomac.
Potosi.
Potsdam.
Pottawatomie.
Potters.
Pottery.
Pottstown.
Pottsville.
Poughquag.
Powelton.
Poxono Island.
Prairie Bluff.
Prairie d'Ane.
Premedidial.
Pre-Meridian
Preston.
Price.
Primal.
Princeton.
Procamelus.
Proctor.
Productal.
Productive.
Prospect Mountain.
Protean.
Protoceras.

Pteranodon.
Puckwunge
Puerco.
Puget.
Pulaski.
Pulliam.
Purgaton.
Putnam Hill.
Putnamville.
Puyallup.
Quadrant.
Quakertown.
Quarry Creek.
Quartz rock.
Quartz slate.
Quebec.
Queen Charlotte.
Queen City.
Queens River.
Quesnel Lake.
Quesnel River.
Quinnemont.
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Quitman.
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Raccoon.
Racine.
Radiolarian.
Rainy Mountain.
Raleigh.
Rampart.
Rancocas.
Random.
Randville.
Rapids.
Rappahannock.
Raritan.
Reading.
Receptaculites.
Red.
Red Bluff.
Red Creek.
Red Mountain.
Red River.
Red sand rock.
Red Wall.
Redbank.
Redrock.
Redstone.
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Relief.
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Republic.
Requienia.
Reynosa.
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Richmond-Gordon.
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Rico.
Ridley.
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St. Albans.
St. Anthony.
St. Clair.
St. Croix.
St. Elias.
St. Francois.
St. Genevieve.
St. Jean.
St. Joe.
St. John.
St. Joseph.
St. Lawrence.
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St. Marys.
St. Stephens.
St. Peters.
St. Thomas.
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Salmon River.
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San Diego.
San Francisco.
San Miguel.
San Pablo.
San Pedro.
San Saba.
Sangamon.
Sand Hill.
Sand Mountain.
Sandpond.
Sandstone.
Sandsuck.
Sandusky.
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Santa Clara.
Santa Cruz.
Santa Fe.
Santee.
Saskatchewan.
Sassafras River.
Saugeen.
Sault St. Mary.
Savage.
Savanna.

Savoy.
Sawatch.
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Scalent.
Schoharie.
Schooner Head.
Schreyfogels.
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Scotts Creek.
Scutella.
Sea Urchin.
Sebastian.
Secret Canyon.
Sedalia.
Selinsgrove.
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Sellersburg.
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Sevier.
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Sewickley.
Seymour.
Shadrick Mill.
Shakopee.
Shark River.
Sharon.
Sharpsville.
Shasta.
Shasta-Chico.
Shawangunk.
Shawnee.
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Shelbyville.
Shell Bluff.
Shenandoah.
Shenango.
Sherburne.
Sheridan.
Shiloh.
Shimer.
Shinarump.
Shinersville.
Shirley.
Shoal Creek.
Shoo Fly.
Shunganunga.
Shushitna.
Shuswap.
Siamo.
Siderian.
Signal Hill.
Silicious.
Sillery.
Silver Lake.
Silveria.
Simelkameen.
Simmons Bluff.
Sioux.
Skaneatles.
Skunnemunk.
Skwentna.
Smalls Brook.
Smelt Brook.
Smith River.
Smithfield.
Smoky Hill.
Smoky River.
Sneedville.
Snyder Creek.
Sockanosset.
Soldier Creek.
Sooke.
Sopchophy.
South Carrolton.
South Mountain.
South Valley Hill.
Spadra.
Sparry.
Sparta.
Speck Mountain.
Sphinx.
Spirifera pennata.
Spokane.
Spring Creek.
Spring River.
Spring Rock.
Springfield.
Springvale.
Squanjum.
Stafford.
Stamford.
Stanford.
Stanton.
Star Peak.
Starr.
Starucca.
State Quarry.
Steep Rock.
Steilacoom.
Stellarton.
Stockbridge.
Stockton.
Stockwether.
Stokes.
Stones River.
Stony Brook.
Stormville.
Strawn.
Strong.
Stuntz.
Sturgeon.
Styliolina.
Subconglomerate.
Sucarnochee.
Sugarloaf.
Suisure.
Sukonk.
Sulphur.
Summit.
Sumner.
Sunbury.
Sundance.
Sunrise.
Superjacent.
Surgent.
Suttons Island.
Swallow.
Swanton.
Swauk.
Swearinger.
Sweetland.
Sweetwater.
Swift Water.
Sylamon.
Sylamore.
Sylvania.
Syntrialasina.
Syrtensian.
Tachatna.
Taconic.
Tacoynte.
Tahkandit.
Talcoid.
Talcose.
Talladega.
Tallahatta.
Taloga.
Talpa.
Tamana.
Tampa.
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Tar Spring.

Tassagara.
Taunton.
Taylor.
Taylors Ridge.
Taylorsville.
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Tehuelche.
Tejon.
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Tellowa.
Temple Butte.
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Terra Cotta.
Terrace.
Terranovan.
Teton.
Texan.
Texana.
Texanan.
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Thessalon.
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Thomas Hill.
Thompson.
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Thunderhead.
Thurman.
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Tionesta.
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Titanotherium.
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Tolleston.
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Tomlinson.
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Torbay.
Tordrillo.
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Tranquille.
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Ulsterian.
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Unionville.
Unkar.
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Upshur.
Upson.
Ute.
Utica.
Uvalde.
Val Verde.
Valdes.
Valera Bend.
Valley.
Valley Spring.
Valparaiso.
Van Wert.
Vancouver.
Vanport.
Vashon.
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Verdi.
Vergent.
Vermilion.
Vermont.
Vernicular.
Vespertine.
Vicarya.
Vicksburg.
Vicksburgian.
Victoria.
Vilas.
Vinal Haven.
Vincentown.
Vineyard.
Vinita.
Virginian.
Vishnu.
Vola.
Volcan.
Vulcan.
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Wakarusa.
Walden.
Waldo.
Waldrip.
Waldron.
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Wallala.
Wallkill.
Walnut.
Wamsutta.
Wapiti.
Wappinger Valley.
Wapsipinicon.
Warren.
Warrensburg.
Warsaw.
Wartburg.
Washakie.
Washburn.
Washington.
Washington County.
Washita.
Wassonville.

Waswangoning.
Waterline.
Waterloo.
Waterville.
Watts Creek.
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Waynesburg.
Webb Bluff.
Webberville.
Weber.
Weisner.
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West Elk.
West Fork.
West Franklin.
West Jefferson.
West Union.
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White Bluff.
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White Oak Mountain.
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White Prairie d'Ane.
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Whitsett.
Wichita.
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Williamsport.
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Wills Point.
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Wiltons Run.
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Windy Gap.
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Winnipeg.
Winnipegosan.
Winnipesaukee.
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Wyckoff.
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Yentna.
Yogo.
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York.
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Yukon.
Yule.
Zapata.
Zeuglodon.
Zoar.
Zuni.

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PUBLICATIONS OF UNITED STATES GEOLOGICAL SURVEY.

[Bulletin No. 191.]

The publications of the United States Geological Survey consist of (1) Annual Reports, (2) Monographs, (3) Professional Papers, (4) Bulletins, (5) Mineral Resources, (6) Water-supply and Irrigation Papers, (7) Topographic Atlas of United States—folios and separate sheets thereof, (8) Geologic Atlas of United States—folios thereof. The classes numbered 2, 7, and 8 are sold at cost of publication; the others are distributed free. A circular giving complete lists may be had on application.

The Bulletins (formerly sold but now distributed gratuitously by authority of a joint resolution of Congress approved May 16, 1902) treat of a variety of subjects, and the total number issued is large. They have therefore been classified into the following series: A, Economic geology; B, Descriptive geology; C, Systematic geology and paleontology; D, Petrography and mineralogy; E, Chemistry and physics; F, Geography; G, Miscellaneous. This bulletin is the fifty-sixth in Series C, the complete list of which follows:

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3. Fossil faunas of Upper Devonian, along the meridian 76° 30′, from Tompkins County, New York, to Bradford County, Pennsylvania, by Henry S. Williams. 1884. 36 pp.

4. Mesozoic fossils, by Charles A. White. 1884. 36 pp., 9 pls.

10. Cambrian faunas of North America. Preliminary studies, by C. D. Walcott. 1884. 74 pp., 10 pls.

11. Quaternary and recent mollusca of the Great Basin, with descriptions of new forms, by R. Ellsworth Call. Introduced by a sketch of the Quaternary lakes of the Great Basin, by G. K. Gilbert. 1884. 66 pp., 6 pls.

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DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES GEOLOGICAL SURVEY

No. 192

SERIES F, GEOGRAPHY, 29

A GAZETTEER OF CUBA.—Gannett

WASHINGTON
GOVERNMENT PRINTING OFFICE
1902

UNITED STATES GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

A GAZETTEER OF CUBA

BY

HENRY GANNETT

WASHINGTON
GOVERNMENT PRINTING OFFICE
1902

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LETTER OF TRANSMITTAL.

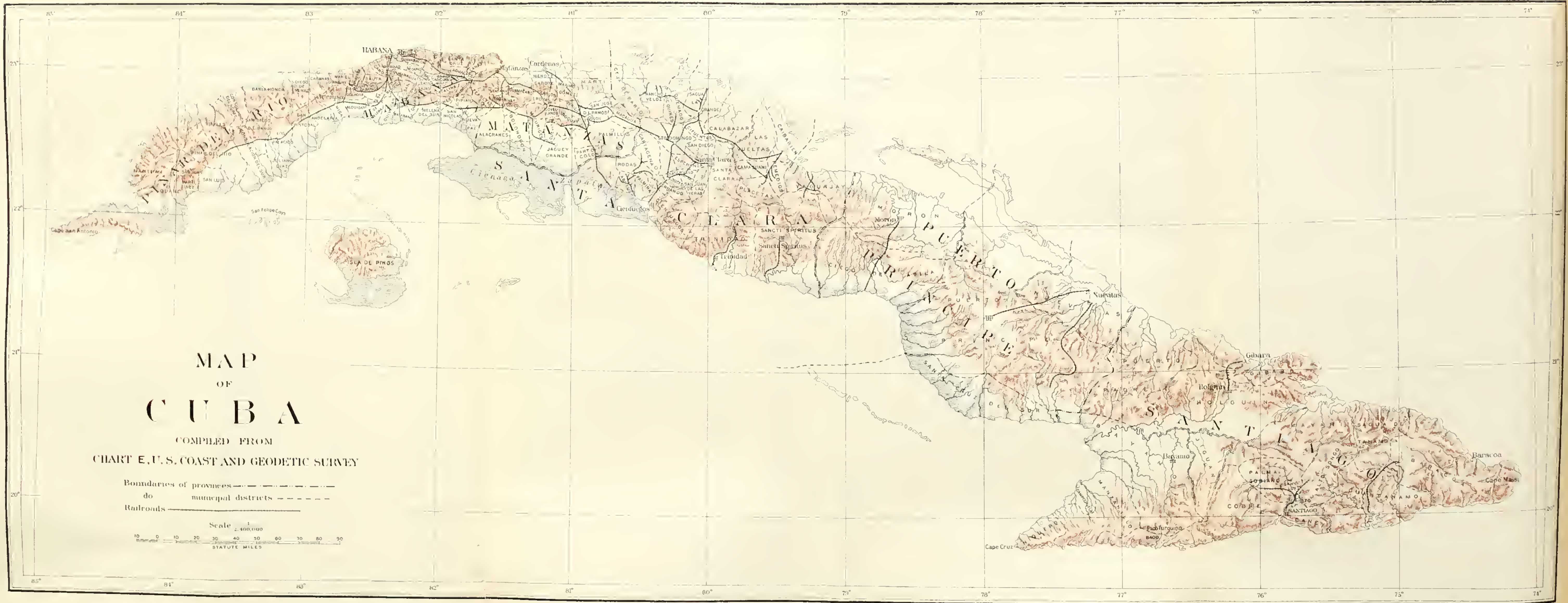
Department of the Interior,
United States Geological Survey,
Washington, D. C., October 8, 1901.

Sir: I transmit herewith, for publication as a bulletin, the manuscript of a gazetteer of Cuba.

Very respectfully,

Henry Gannett,
Geographer.

Hon. Charles D. Walcott,
Director United States Geological Survey.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Santa Clara
Trinidad
Sancti Spiritus
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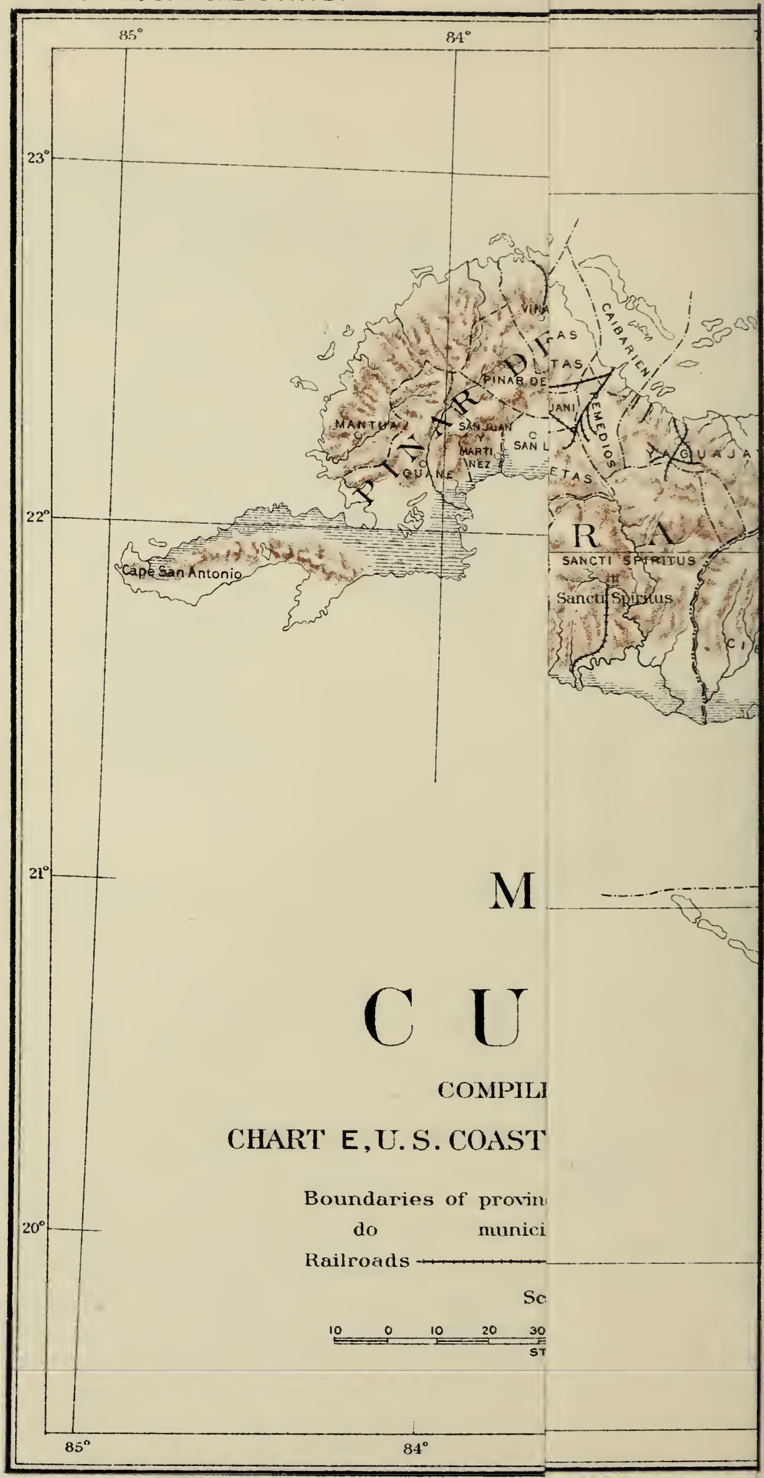
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A GAZETTEER OF CUBA.

By Henry Gannett.

GEOGRAPHY AND TOPOGRAPHY.

Cuba, the largest and most populous of the West Indian Islands, lies directly south of Florida. Habana, the capital, is a little west of south of Key West, and is distant, in a straight line, about 100 miles, being separated from it by the Strait of Florida. Cuba lies between the meridians of 74° and 85° west of Greenwich and between the parallels of latitude 19° 40′ and 23° 33′. Its extreme length, from Cape Maisi on the east to Cape San Antonio on the west, is 730 miles. Its breadth differs greatly in different parts, ranging from 100 miles in the east to 25 miles in the neighborhood of Habana. Its area, including Isla de Pinos and the bordering keys, may be accepted as approximately 44,000 square miles.

The north coast is mainly steep and rocky and in the middle portion of the island is bordered by lines of islands and coral reefs, the passages through which are extremely intricate. These islands are low, mainly covered with mangrove thickets, and contain few inhabitants. In the western part of Cuba the coast bluffs are low, being only about 100 feet in height, but they gradually rise eastward until in the neighborhood of Matanzas they are fully 500 feet above the sea. Farther east, in Santa Clara and Puerto Principe, they are lower, while toward the eastern end of the island, in Santiago Province, the coast is rugged and almost mountainous, rising from the sea in a succession of terraces.

From Cape Maisi westward the south coast is bordered by mountains. That portion of it extending from Santiago to Cape Cruz is bordered by Sierra Maestra, which rises abruptly from the water to an altitude of several thousand feet. From Cape Cruz the coast trends northward around the Bay of Buena Esperanza, into which opens the broad and fertile valley of Rio Cauto, the largest stream of the island. The shores of this bay and most of the coast thence westward to Cape Antonio, the west point of Cuba, are low and marshy. This coast consists in the main of a narrow strip, but west of Cienfuegos it extends far inland, forming the great Zapata Swamp, an almost impenetrable region 75 miles in length in an east-and-west direction by 30 miles in breadth. Off the south coast are many low, marshy, mangrove-covered islets. Most of the harbors of both the north and south coasts are of peculiar shape, with narrow, crooked entrances, opening within into basins of considerable extent, which are thus completely sheltered. This is the character of the harbors of Habana, Santiago, Cienfuegos, Guantanamo, and many others.

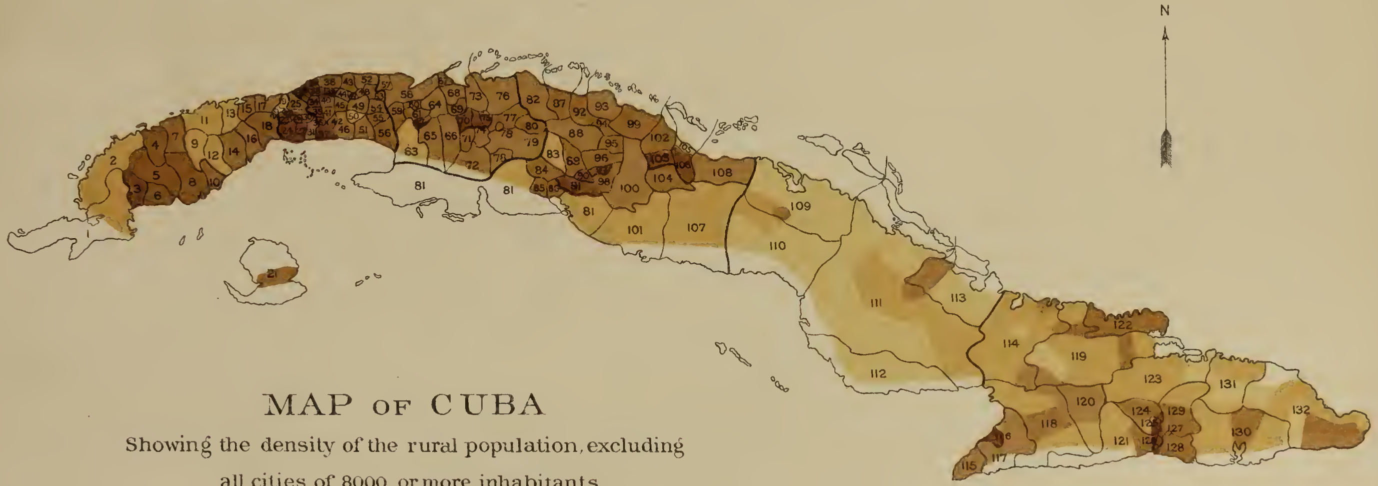
The relief of the island is complicated, being composed of several disconnected features which apparently bear little relation to one another. The middle portion of the island, including the provinces of Habana, Matanzas, Santa Clara, and Puerto Principe, presents little relief, consisting in the main of broad, undulating plains and shallow valleys. It is only at the two ends of the island, namely, in Pinar del Rio in the west and Santiago in the east, that the country presents any decided features. Throughout Pinar del Rio Province runs a range of hills parallel to the coasts, a little north of the middle of the island, known as the Organ Mountains (Sierra de los Orgaños). These rise in many places to altitudes exceeding 2,000 feet, and culminate in the summit known as Guaguibon, which has an altitude of about 2,500 feet. From the crest of this range, which forms a watershed, the land descends gently northward and southward to the coast. The southward slopes form the celebrated tobacco land known as Vuelta Abajo.

The Organ Mountains cease as a range a little west of the city of Habana, but traces of this uplift can be followed eastward, through Matanzas and Santa Clara provinces, in lines of low hills rising from the extended plains. Such hills are the Tetas Managua, near Habana, and the Pan del Matanzas, just south of the city of the same name.

In Santiago Province, at the eastern end of the island, the country breaks up in bold relief. Along the south coast is the Sierra Maestra, separating the coast from the valley of the Rio Cauto, reaching altitudes exceeding 5,000 feet, and in one peak, Turquino, a height of 8,320 feet. This range extends unbroken from Cape Cruz eastward to Santiago, and thence in a more broken, plateau-like form, to the east end of the island. The interior of Santiago Province north of the valley of the Cauto consists in the main of a greatly dissected plateau, rising to altitudes of 1,000 to 2,000 feet.

Isla de Pinos lies to the south of the main island. The northern part of this island is slightly broken in surface, while the southern part, which is nearly disconnected from it by a strip of swamp, is low and level.

The rivers of Cuba are numerous, but short, and few of them are of any importance to navigation. The largest stream is the Rio Cauto, in Santiago Province, which drains a broad and very fertile valley. This river, which has a total length of 150 miles, is navigable for small vessels as far as Cauto Embarcadero, about 50 miles above its mouth.



MAP OF CUBA

Showing the density of the rural population, excluding
all cities of 8000 or more inhabitants

LEGEND

☐ Less than 2 to Sq. mile.
▨ 2-6 to Sq. mile
▨ 6-18 to Sq. mile.
▨ 18-45 to Sq. mile.
▨ 45-90 to Sq. mile
▨ Over 90 to Sq. mile

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The next river in point of importance is the Sagua la Grande, on the north slope of the island, in Santa Clara Province, which is navigable for about 20 miles. Of the many other streams of the island few are navigable at all, while others are navigable only within their estuaries. The interior of the island is dependent upon its few railroads, of which there are only 1,100 miles, and its poor wagon roads.

MINERAL RESOURCES.

The mineral resources of the island, so far as developed, are limited, and consist almost entirely of iron ore. Iron has been mined for many years at the south base of the Sierra Maestra, a few miles east of Santiago. The ores are hematite, with a little limonite, and are found principally as float ore in the bowlders. It is not certain that any ore has been found in place. The ore is of excellent quality, containing about 62 per cent of iron, and is easy to work. The developments are in the hands of three companies, and nearly all of the ore produced has been shipped to the United States, principally to Baltimore. Copper deposits, said to have been of enormous richness, were worked for many years under the Spanish régime, in the neighborhood of Cobre, but in recent years operations have ceased, and the mines are at present filled with water. Asphaltum has been found in several places, particularly near the city of Santa Clara, where it has been utilized in making illuminating gas.

A little gold and silver has been mined in past times, but for many years the island has not produced any of these metals.

CLIMATE.

The climate of Cuba is comparatively simple and can be briefly described. With the long narrow shape of the island and its great extent of coast line, it has, in high degree, an insular climate, with a high mean temperature, great humidity, and ample rainfall. Lying within the tropics, the island is subjected to the northeast trades, which blow over it steadily and constantly. They bring to the north coast and the northern slopes of the island an ample rainfall, while the southern slopes, especially at the eastern end, protected by the mountains from the trade winds, receive a much less amount of rainfall, although sufficient for the cultivation of most crops. At Habana, on the north coast, the mean annual temperature is 77°, and the range of temperature between the mean of the hottest month and that of the coldest month is from 82° to 71°. The highest temperature on record in Habana is 100.6°; the lowest, 49.6°. The maximum temperature is not as high as in many northern cities of the United States, but the duration of high temperature in Cuba is much greater. But notwithstanding the long-continued high temperature, the northern slopes of the island are cooled by the constant trade winds, and the nights, even in summer, are cool. The figures given above for Habana represent the conditions of the island fairly well, excepting that on the south coast and in the interior the temperature is a little higher. The mean annual rainfall at Habana, derived from observations of many years' duration, is 52 inches, and this figure represents quite closely the rainfall throughout the north coast of the island. The rainfall is decidedly less than upon the Gulf coast of the United States, and is but little greater than that of the northern seaboard cities. About two-thirds of this rainfall descends between May and October, the remainder of the year being comparatively dry.

CIVIL DIVISIONS.

For administrative purposes Cuba is divided into six provinces, which, named from the west eastward, are Pinar del Rio, Habana, Matanzas, Santa Clara, Puerto Principe, and Santiago. These provinces are divided into municipal districts, or *terminos municipales*, of which there are 132 in the island, including the Isla de Pinos, which forms a municipal district of Habana Province. The number of municipal districts in each province is given below.

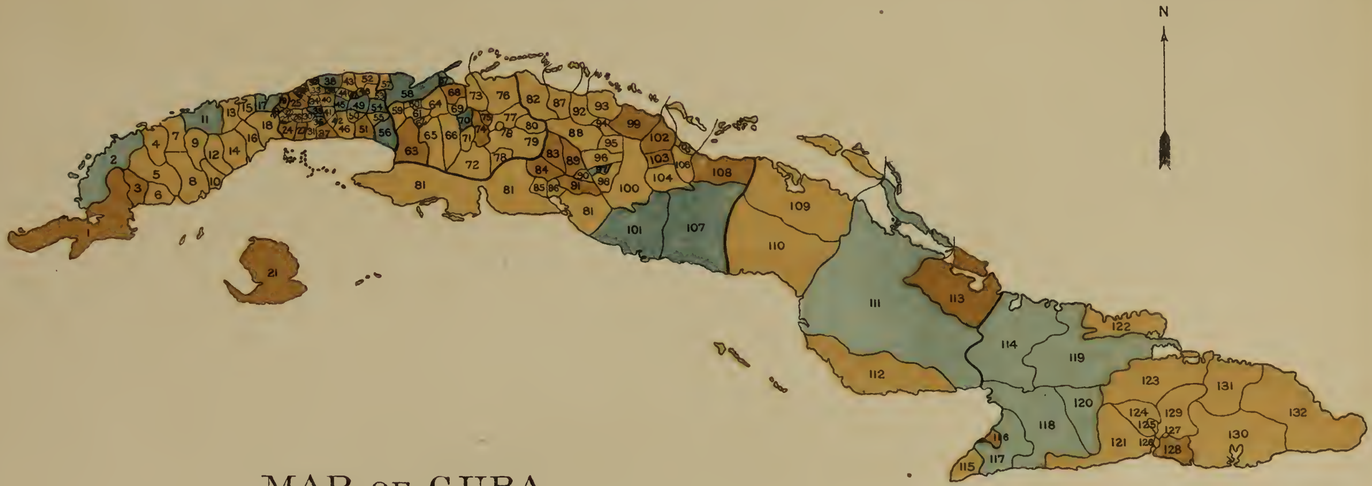
Number of municipal districts in each province.

Habana Province	36
Pinar del Rio	20
Matanzas	24
Santa Clara	28
Puerto Principe	5
Santiago	19

The municipal districts are in turn divided into barrios, of which there are approximately 1,500 in the island, including those constituting the cities. Such organizations as cities, in the sense in which we understand the term, do not exist in Cuba. The city of Habana has no legal limits, but comprises most of the municipal district of that name. This includes not only a large urban population, but also a small number of rural inhabitants. By the recent census the population of the cities of the island was obtained by selecting from among the barrios composing the municipal districts those whose population was urban in character.

HISTORY.

Cuba was discovered by Columbus on October 28, 1492, the landing being at or near the present city of Nuevitas, on the north coast of the province of Puerto Principe. He explored this coast from the Laguna de Moron eastward to Cape Maisi, at the eastern end of the island. On this voyage and in other subsequent visits to the island, he explored most of the remaining parts of the coast.



MAP OF CUBA

Showing the distribution by sex

LEGEND

▨	▨	▨
Males 50 to 55%	Males over 55%	Females over 50%

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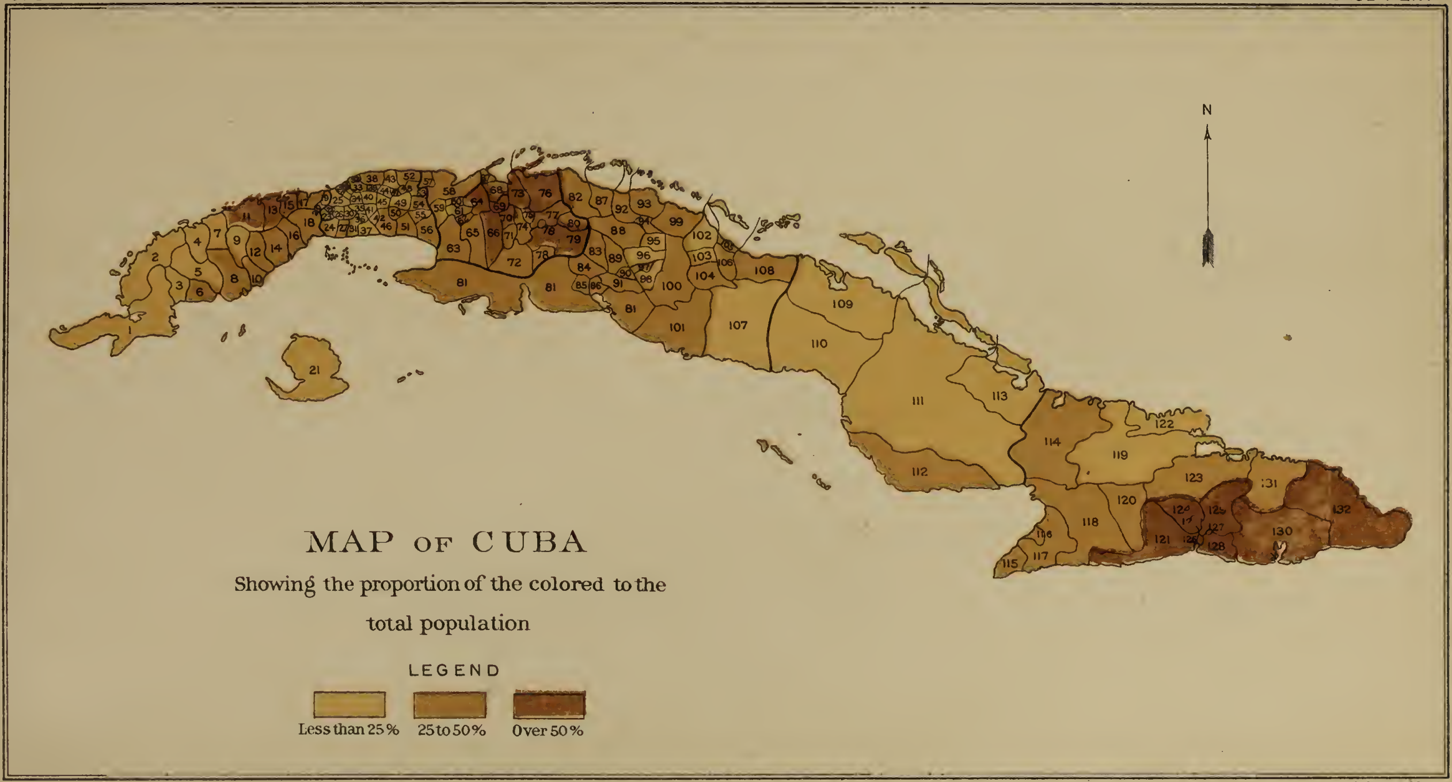

MAP OF CUBA

Showing the proportion of the colored to the total population

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For several years little attention was paid to the island, and it was not until 1512 that colonization was attempted. That year Velasquez, with a force of 300 men, founded the town of Baracoa, near the eastern end of the island, and two years later Trinidad and Santiago, together with a number of other towns in the interior. In 1519 Habana was founded, and in 1552 it became the capital. The growth of European population in Cuba was particularly slow during the first 250 years, and in 1775 the population numbered only 171,620. The occupation of Cuba by the Spaniards was continuous from the date of its colonization to 1898, with the exception of the English invasion of 1762, during which Habana and a part of Matanzas Province were taken possession of by the English and held for a few months. On December 10, 1898, the sovereignty of Spain in Cuba was relinquished by treaty to the United States, after a war which, though brief, was exceedingly disastrous to Spanish power and prestige.

While thus measurably free from foreign invasion for centuries, the island was on several occasions the scene of domestic disturbances, due in nearly all cases to Spanish misrule. Such were the insurrections of 1717, 1812, 1826, and at several later dates, but none of these were of serious importance. In 1868, however, an insurrection broke out, and continued, with desultory fighting in various parts of the island, for ten years. The recent insurrection was the most general and serious of these domestic disturbances. It broke out in 1895, and was ended in 1898 by the intervention of the United States. It is unnecessary to speak of this at length, since the events of that struggle are recent and well known.

The aboriginal inhabitants of Cuba have been variously estimated at from 200,000 to 1,000,000. In all probability the former figures are nearer the truth. Upon the settlement of the island by the Europeans these natives were promptly enslaved and put to work on the plantations and in the mines, where they soon succumbed to hard work, and within fifty years of the date of the first colonization, or long before the end of the sixteenth century, the aboriginal population of Cuba had been wiped off the face of the earth, and at present no trace of Indian blood is to be found in the island. Upon the destruction of the Indian element its place was taken by African slaves, and for centuries the African slave trade was a most profitable one, ceasing only with the abolition of slavery in 1883.

POPULATION.

The population of Cuba, according to the census taken under the direction of the United States War Department in 1899, was 1,572,797. Twelve years earlier, in 1887, according to a census taken under Spanish authority, the number was reported as 1,631,687, or nearly 59,000 greater. After allowing for the probable increase of the population between 1887 and 1895, the date on which the insurrection broke out, the loss of life, as indicated by these two censuses, may be estimated at nearly 200,000, a loss which may be attributed to the war and to the accompanying reconcentration.

The first census of Cuba upon which any reliance can be placed was taken in 1775. The following table shows the population at the date of each subsequent census and the decennial rate of increase:

Population of Cuba at each census.

Year.	Population.	Rate of increase per decade.
1775	171,620	....
1792	272,300	31
1817	572,363	34
1827	704,486	23
1841	1,007,624	29
1861	1,396,530	18
1877	1,509,291	5
1887	1,631,687	8
1899	1,572,797	....

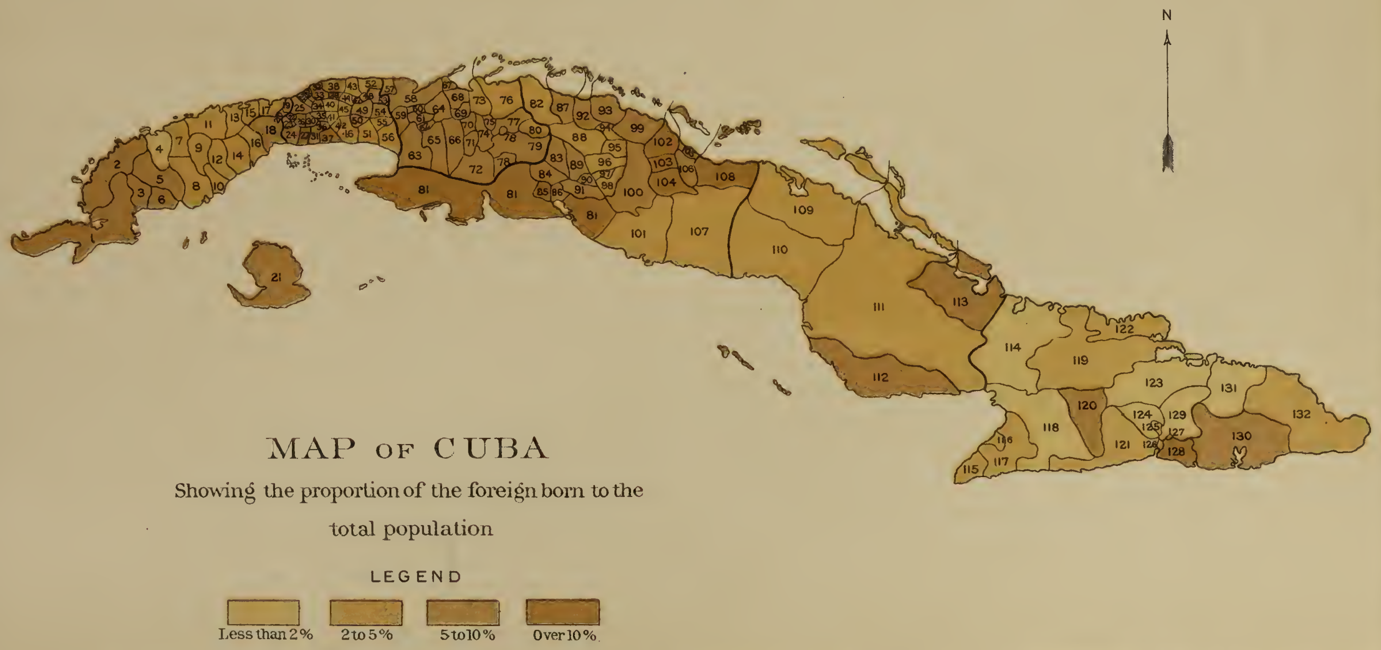
The loss in population incident to the insurrection was sustained entirely by the three western provinces, the three eastern provinces having gained during the period between 1887 and 1899, although Santa Clara, one of the largest provinces of the island, gained but a trifling amount.

The density of population, taking the island as a whole, was 35.7 inhabitants to the square mile. The area, population, and density of population of the six provinces are given in the table below:

Area, total population, and density of population, by provinces.

Province.	Area.	Population.	Density.
	Sq. miles.		
Habana	2,772	424,811	153
Matanzas	3,700	202,462	55
Pinar del Rio	5,000	173,082	35
Puerto Principe	10,500	88,237	8
Santa Clara	9,560	356,537	37
Santiago	12,468	327,716	26

The urban population of Cuba, including in that term the inhabitants of all cities of more than 8,000 population, was 32.3 per cent of the entire population, or a little less than one-third, being but a trifle smaller than that of the United States. Including, however, all cities down to 1,000 each, the proportion of urban population rises to 47.1 per cent, that of the United States being the same. The capital and chief city of the island is Habana, situated on the north coast near its western end, with a population of 235,981. Other important cities are Santiago, the capital of Santiago Province, on the south coast near the eastern end of the island, population 43,090; Matanzas, the capital of Matanzas Province, on the north coast, population 36,374; Cienfuegos,



MAP OF CUBA

Showing the proportion of the foreign born to the total population

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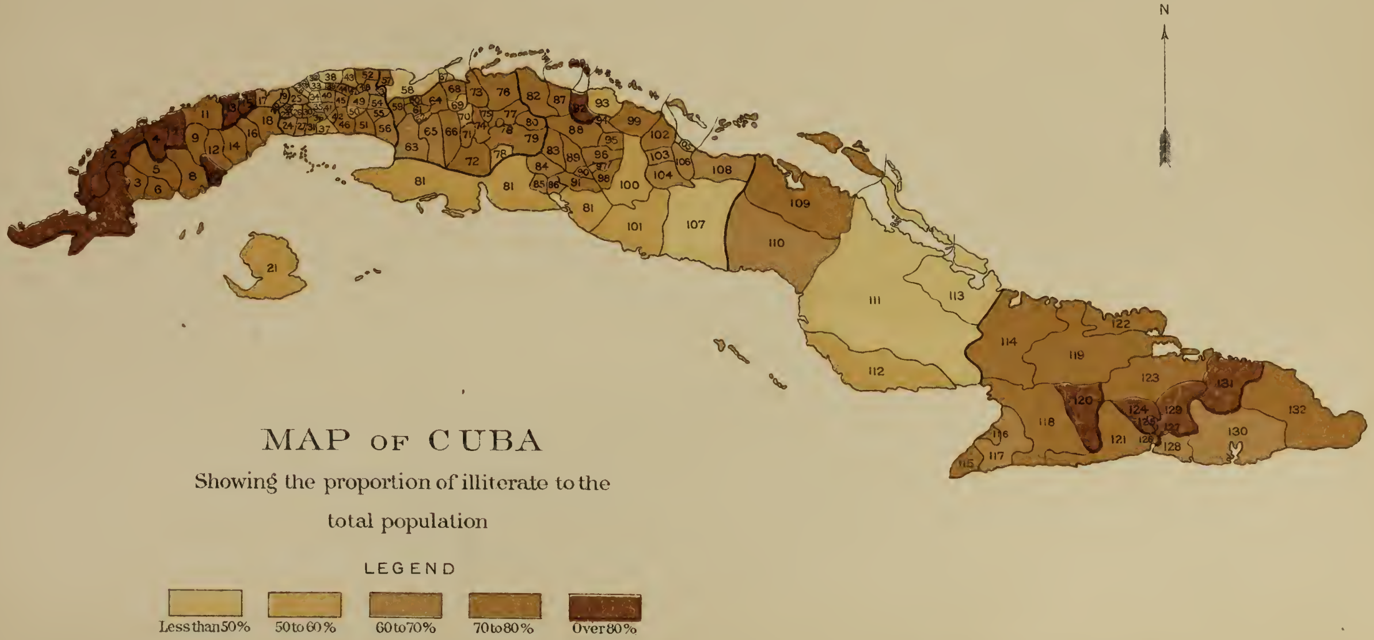

MAP OF CUBA

Showing the proportion of illiterate to the total population

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in Santa Clara Province, on the south coast, population 30,038; Puerto Principe, the capital of the province of the same name, situated in the interior, population 25,102; Cardenas, on the north coast, in Matanzas Province, population 21,940. Most of the larger cities are situated upon the seacoast rather than in the interior, indicating their commercial character.

The center of population of Cuba in 1899 was situated in latitude 22° 15′ and longitude 80° 23′. This locates it in Santa Clara Province, 30 miles southwest of the city of Santa Clara, and 8 miles northeast of Cienfuegos. It is at a distance of 76 miles northwest of the geographic center of the island.

As to sex, the population was distributed in the proportions of 51.8 per cent males and 48.2 per cent females, the excess in the number of males being probably due to immigration.

As to race, there were 68 per cent white and 32 per cent colored. The colored formed less than one-third of the population, and their proportion has for many years been diminishing. The foreign-born formed 9 per cent of the total population, which leaves 60 per cent as native whites. Three-fourths of all the foreign-born in Cuba came from Spain. Of the remainder, the countries which most freely contributed were China, Africa, and the United States. Other West Indian islands, and even the neighboring countries of Central and South America, contributed very few, showing the extremely sedentary character of these peoples.

The foreign-born element was found mainly in the cities, and especially in the larger ones. Nearly one-third of the entire foreign-born element was found in the city of Habana, where it constituted 22 per cent of the entire population of the city.

The proportion of married, even when we add to the number of those legally married those who have assumed marital relations without the sanction of law, is very small, being only 24 per cent of the population, as contrasted with the proportion in the United States, 35.7 per cent. Of this proportion thus living together, either with or without the sanction of law, about two-thirds were legally married and one-third were living together without marriage. The legally married constituted only about one-half the proportion that they do in the United States.

Of the total population of Cuba, 34 per cent, or a little more than one-third, were able to read. For obvious reasons, illiteracy was greater among the colored than among the white, and greater in rural districts than in cities.

The proportion of Cubans reported as being employed in gainful occupations was 40 per cent, or two-fifths of the total population, a proportion larger than in either the United States or Porto Rico. Of the males, 68 per cent were reported as wage-earners; of the females only 9 per cent.

The wage-earners were distributed in the following proportions among the great groups of occupations:

Occupations of wage-earners.

	Per cent.
Agriculture, fisheries, and mining	48
Domestic and personal service	23
Manufactures	15
Trade and transportation	13
Professions	1

AGRICULTURE.

There were, in 1899, 60,711 farms, with a total area of 262,858 caballerias, a caballeria being equal to 33 acres. The average size of a farm in Cuba was 143 acres, and the average area cultivated per farm 13 acres. Of the entire area of Cuba 30 per cent was reported to be in farms, but only 3 per cent of the area of the island, and only 10 per cent of the area in farms, was under cultivation. The most highly cultivated parts of the island were in Matanzas and Habana provinces. In Puerto Principe cultivation is comparatively slight, most of the farms consisting of mere cattle ranches.

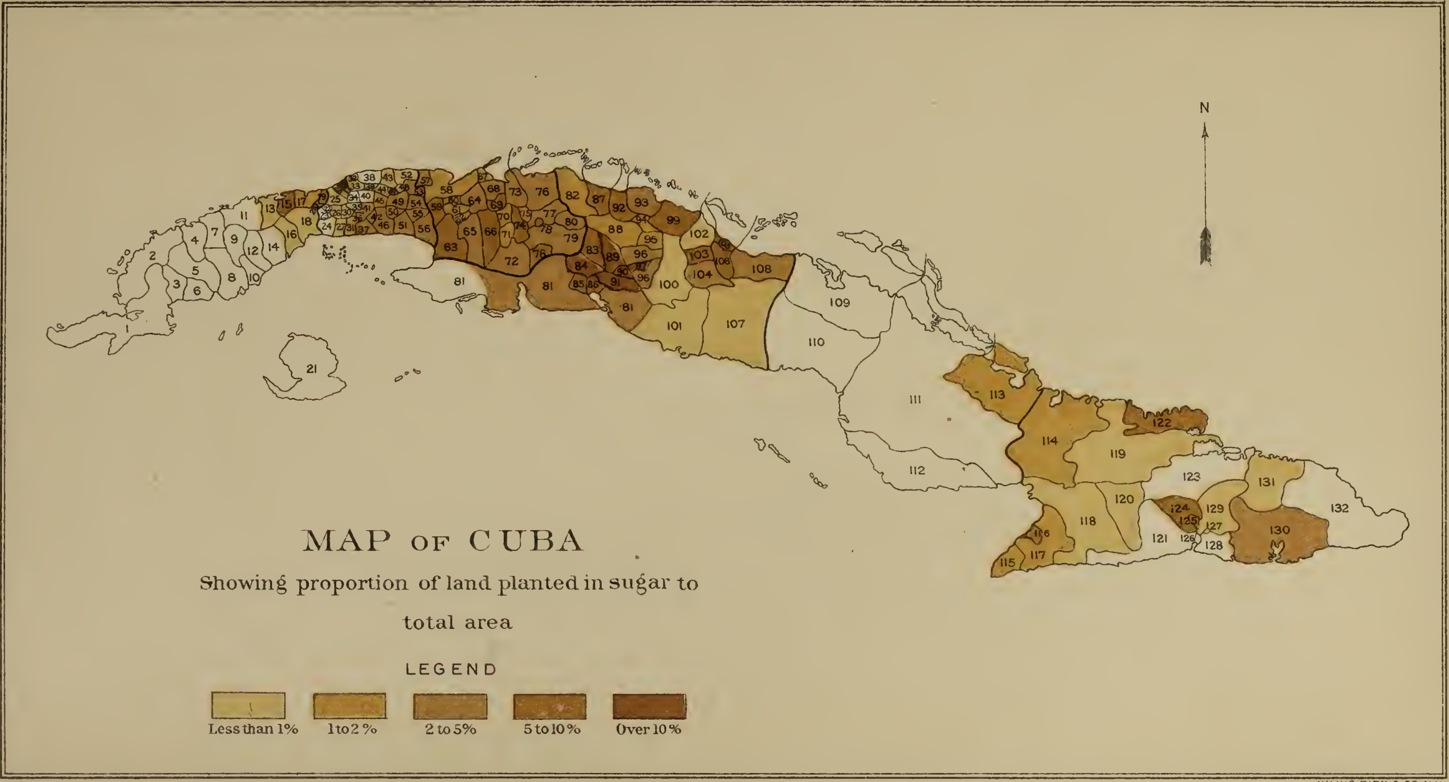
Of the cultivated area of Cuba, less than one-half was owned by its occupants, and a little more than one-half was rented. Of this cultivated area 85 per cent was occupied by whites, either as owners or renters, and only 11 per cent by colored, the remainder being unknown.

The only measure of farm products obtained by the census was in terms of areas cultivated in the several crops. Measured thus by areas under cultivation, sugar cane is far the most important crop of the island, occupying 47 per cent, or nearly one-half the cultivated area. Sweet potatoes are second on the list, with 11 per cent; tobacco 9 per cent. Bananas occupy little less than 9 per cent, and other crops occupy still smaller proportions. Sugar cane was produced in all the provinces of the island, but had the greatest importance in the provinces of Santa Clara and Matanzas, which together produced nearly three-fourths of the crop, as measured by the area under cultivation. Santiago produced about one-sixth of the crop and Habana about one-sixteenth, the proportions produced in the other provinces being trifling.

Tobacco was produced in all the provinces, but three-fourths of the entire production, as measured by the area under cultivation, came from the province of Pinar del Rio, and nearly all the remainder from Habana and Santa Clara.

Coffee, which was once a product of great importance in Cuba, has diminished in recent years, and now but little is produced, that little coming from the provinces of Santiago and Santa Clara.

There were in Cuba, in 1899, 207 sugar mills, or centrals, with a daily production of 61,407 bags of sugar. There were also 85 stills, with a daily capacity of 161,751 gallons.



MAP OF CUBA

Showing proportion of land planted in sugar to total area

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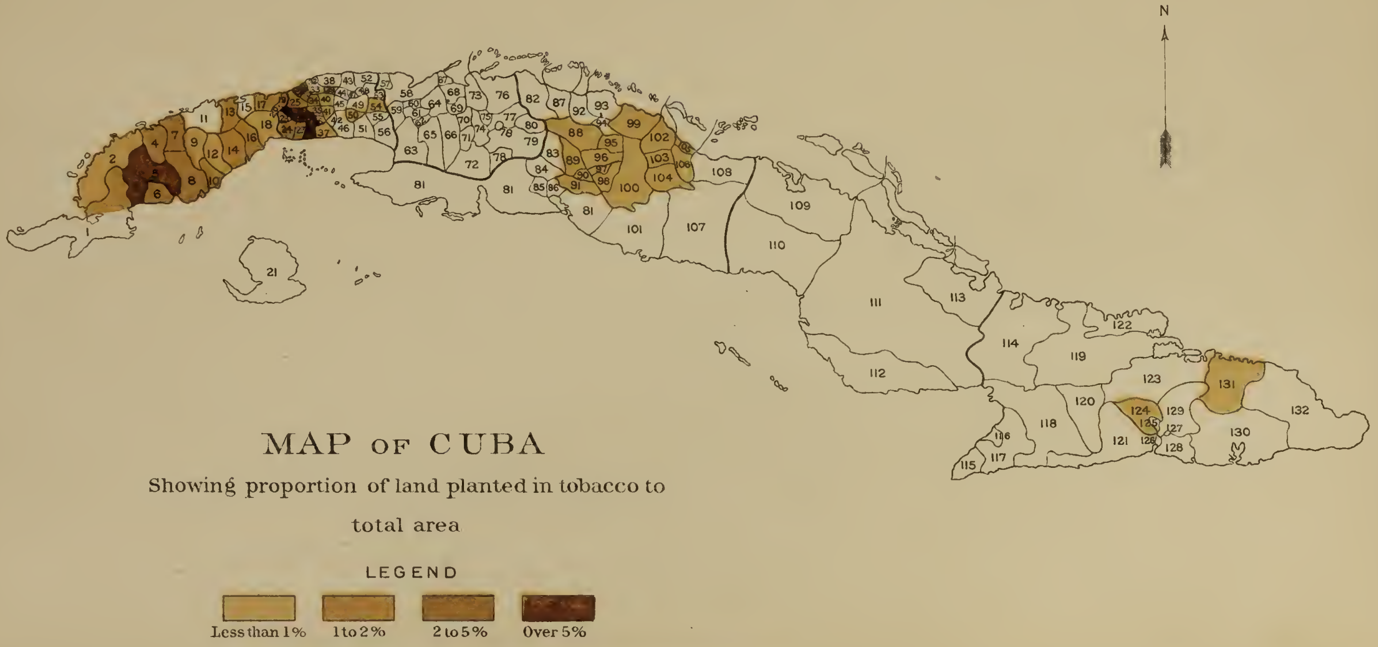

MAP OF CUBA

Showing proportion of land planted in tobacco to total area

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GAZETTEER.

[In the following list the Spanish generic terms are used, followed by the English equivalent.]

Abalos, Punta; point on west coast of province of Pinar del Rio.

Abreus; municipal district in province of Santa Clara. Area 52 square miles. Population 3,995.

Abreus; city in interior of province of Santa Clara. Population 1,300.

Aceituno, Arroyo; small branch of Arroyo Zacatecas in northern part of province of Santa Clara.

Acosto, Arroyo; creek in northern part of Sagua de Tanamo, province of Santiago.

Acostos, Sierra de Los; mountains in municipal district of Guane, province of Pinar del Rio.

Afuera, Punta de; point at entrance of Bahia Honda, north coast of province of Pinar del Rio.

Afuera, Punta de; point on north coast of San Antonio peninsula, province of Pinar del Rio.

Agabama, Rio; tributary of Rio Manati in southern part of province of Santa Clara. Length 20 miles.

Agabama, Sierra Alta de; mountains in municipal district of Santa Clara, province of Santa Clara.

Agial, Arroyo; short, left-hand branch of Toa River in Santiago Province.

Aguacate; municipal district in Habana Province. Area 63 square miles. Population 3,163.

Aguacate; city in interior of Habana Province. Population 1,555.

Aguacate; village in municipal district of Bahia Honda, province of Pinar del Rio.

Aguacate; barrio in municipal district of Aguacate, province of Habana.

Aguacate; barrio in municipal district of Bahia Honda, province of Pinar del Rio.

Aguacate, Arroyo; right-hand branch of Rio Caguanes, in northern part of province of Santa Clara.

Aguacate, Loma; hills in western part of municipal district of Moron, province of Puerto Principe.

Aguacate, Loma del; hill in municipal district of Bahia Honda, province of Pinar del Rio.

Aguacero, Arroyo; small stream in municipal district of Puerto Principe, province of Santiago.

Aguada, Cayo; small island between Cayo Romano and north coast of province of Puerto Principe.

Aguada, Cayo de la; island off north coast of province of Santa Clara.

Aguada de Moya; village in northern part of province of Santa Clara, municipal district of Las Vueltas.

Aguada de Moya; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 1,065.

Aguada de Pasajeros; village in municipal district of Cienfuegos, province of Santa Clara.

Aguada de Pasajeros; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 8,777.

Aguadilla, Arroyo; short, left-hand branch of Rio Caguanes, in northern part of province of Santa Clara.

Aguadores, Surgidero de; anchorage in southern coast of province of Santiago, municipal district of Santiago de Cuba.

Aguas, Arroyo; stream in eastern part of municipal district of Ciego de Avila, province of Puerto Principe.

Aguas Blancas, Arroyo; right-hand branch of Rio Cauto in municipal district of Puerto Padre, Santiago Province. Length 35 miles.

Aguas Bonitas; barrio in municipal district of San Juan de las Yeras, province of Santa Clara. Population 415.

Aguas Claras; barrio in municipal district of Holguin, province of Santiago. Population 681.

Aguas Claras; barrio in municipal district of Rancho Veloz, province of Santa Clara. Population 1,218.

Aguas Verdes; barrio in municipal district of Bejucal, province of Habana.

Aguas Verdes, Arroyo; left-hand branch of Rio de las Caravelas in province of Puerto Principe.

Aguilar, Punta la; point on south coast of province of Santa Clara.

Agustin, Rio; left-hand branch of Rio San Juan, in northern part of province of Matanzas.

Ahoga Gallinas, Arroyo; stream in southern part of province of Santa Clara.

Ahoga Mulos, Arroyo; branch of Rio Nuevo Mayabeque in Habana Province.

Ajenjibre, Loma de; hills in eastern part of province of Puerto Principe.

Aji, Alto del; elevation on northern coast of Cayo Romano.

Aji, Cerros del; hills in eastern part of Isla de Pinos.

Alacrán; barrio in municipal district of Cifuentes, province of Santa Clara. Population 446.

Alacranes; municipal district in province of Matanzas. Area 322 square miles. Population 8,110.

Alacranes, Cayo; small island off north coast of province of Pinar del Rio.

Albino; barrio in municipal district of Viñales, province of Pinar del Rio. Population 739.

Alcala; village in municipal district of Holguin, province of Santiago.

Alcala; barrio in municipal district of Holguin, province of Santiago. Population 2,022.

Alcaldi, Arroyo; stream sinking in Cienaga Zapata in southern part of province of Santa Clara.

Alcatraz, Cayo del; island north of province of Santa Clara.

Alegre, Punta; point on coast of municipal district of Holguin, province of Santiago.

Alegrias, Estero; inlet and creek on south coast of province of Puerto Principe.

Alfonsos; village in municipal district of Holguin, province of Santiago.

Alfonsos; barrio in municipal district of Holguin, province of Santiago. Population 1,086.

Alfonso XII; town in municipal district of Alacranes, province of Matanzas.

Algodonar, Laguna del; lake in municipal district of Guane, southern part of province of Pinar del Rio.

Algodonar, Laguna del; small lake in province of Puerto Principe, municipal district of Moron.

Algodonar, Punta del; point on entrance of Guadina Harbor, on west coast of province of Pinar del Rio.

Alijo, Cayo; islet off north coast of municipal district of Puerto Principe, province of Puerto Principe.

Almendares, Rio; river in Habana Province, flowing to north coast.

Almiqui, Cerro; mountain in western part of Holguin, province of Santiago.

Alonso Rojas; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Alonso Rojas; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio. Population 2,132.

Alonso Rojas, Cayos; islets off west coast of province of Pinar del Rio.

Alonso Rojas, Punta; point on west coast of Pinar del Rio.

Alquizar; municipal district in province of Habana. Area 78 square miles. Population 8,746.

Alquizar; city in interior of province of Habana. Population 3,714.

Alquizar, Primero; barrio in municipal district of Alquizar, province of Habana. Population 1,837.

Alquizar, Segundo; barrio in municipal district of Alquizar, province of Habana. Population 1,877.

Altagracia; town in municipal district of Puerto Principe, province of Puerto Principe.

Altagracia; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 1,240.

Altamisal; barrio in municipal district of Maximo Gomez, province of Matanzas. Population 776.

Altamisal; barrio in municipal district of Perico, province of Matanzas. Population 1,689.

Altares, Ensenada los; small bay on south coast of Santiago Province, municipal district of Santiago de Cuba.

Alto Songo; municipal district in province of Santiago. Area 450 square miles. Population 12,770.

Alto Songo; city in interior of province of Santiago. Population 3,158.

Alvarez; village in municipal district of Santo Domingo, province of Santa Clara.

Alvarez; barrio in municipal district of Bolondron, province of Matanzas.

Alvarez; barrio in municipal district of Santo Domingo, province of Santa Clara.

Alvaro, Punta de; point on north coast of province of Santa Clara.

Amarga, Laguna; lake in southern part of municipal district of Guantanamo, province of Santiago.

Amarillas; village in municipal district of Colon, province of Matanzas.

Amarillas; barrio in municipal district of Colon, province of Matanzas. Population 1,746.

Amaro; village in municipal district of Cifuentes, province of Santa Clara.

Amaro; barrio in municipal district of Cifuentes, province of Santa Clara. Population 248.

Amasabo; village in municipal district of Holguin, Santiago Province.

Anafe; barrio in municipal district of Bauta, province of Habana.

Ancon; village in municipal district of Viñales, province of Pinar del Rio.

Ancon; barrio in municipal district of Viñales, province of Pinar del Rio. Population 926.

Anconal, Sierra del; mountains in municipal district of Guane, western part of province of Pinar del Rio.

Andres, Arroyo; stream in the municipal district of Sagua de Tanamo, province of Santiago.

Angeles, Arroyo; small right-hand branch of Rio Cabreras, Santiago Province.

Anilito; barrio in municipal district of Managua, province of Habana.

Anton, Arroyo; right-hand branch of Rio Naranjo, municipal district of Puerto Padre, province of Santiago.

Arabos; barrio in municipal district of Macagua, province of Matanzas. Population 2,241.

Aragon, Sierra de; mountains in eastern part of municipal district of Baracoa, province of Santiago.

Arango; barrio in municipal district of Palmira, province of Santa Clara. Population 2,008.

Arango, Lomas de; hills in Habana Province.

Arenal, Punta del; point on north coast of province of Puerto Principe, municipal district of Nuevitas.

Arenas; town in municipal district of Puerto Padre, province of Santiago.

Arenas; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,119.

Arenas; barrio in municipal district of Santo Domingo, province of Santa Clara.

Arenas, Arroyo; branch of Rio Culebra, in Habana Province.

Arenas, Punta; point on south coast of province of Santa Clara, near city of Cienfuegos.

Arenas, Punta; point on west coast of Isla de Pinos.

Arenas, Punta; point on northern coast of Cayo Sabinal, province of Puerto Principe.

Arenillas, Arroyo; tributary of the Palizon, in southern part of Puerto Principe.

Ariguanabo, Laguna de; lake in Habana Province.

Arimao; town on river of same name in municipal district of Trinidad, province of Santa Clara.

Arimao; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 3,015.

Arimao, Rio; river in province of Santa Clara, flowing to southern coast. Length 40 miles.

Aristizabal, Punta; point on south coast of province of Santa Clara.

Armenteros, Rio; tributary to Rio Nuevo Mayabeque, in Habana Province.

Armonia; barrio in municipal district of San Antonio de los Baños, province of Habana. Population 672.

Arrieta; barrio in municipal district of Cartagena, province of Santa Clara.

Arroyo; barrio in municipal district of Matanzas, province of Matanzas.

Arroyo Apolo; village in Habana province.

Arroyo Arenas; barrio in municipal district of Cano, province of Habana. Population 1,003.

Arroyo Blanco; village in municipal district of Gibara, province of Santiago.

Arroyo Blanco; barrio in municipal district of Gibara, province of Santiago. Population 1,739.

Arroyo Blanco; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 862.

Arroyo Blanco, Loma; hill in western part of province of Puerto Principe, municipal district of Ciego de Avila.

Arroyo Hondo; village in municipal district of Guantanamo, province of Santiago.

Arroyo Hondo; barrio in municipal district of Guantanamo, province of Santiago. Population 1,040.

Arroyo Hondo; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio. Population 1,918.

Arroyo Naranjo; village in Habana Province.

Arroyo Naranjo; barrio in municipal district of Habana, province of Habana. Population 1,771.

Arroyo Naranjo; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio.

Arroyon, Arroyo; short right-hand branch of Toa River, in Santiago Province.

Arroyos; barrio and village in municipal district of Mantua, province of Pinar del Rio.

Arroyo Vuelta; barrio in municipal district of Jaruco, province of Habana.

Artemisa; municipal district in province of Pinar del Rio. Area 181 square miles. Population 9,317.

Artemisa; city in interior of Pinar del Rio. Population 2,312.

Artemisa; barrio in municipal district of Artemisa, province of Pinar del Rio. Population 4,179.

Arzobispo, Sierra de; hills near northern coast of Habana Province.

Aserradero; village in southern part of municipal district of Cobre, province of Santiago.

Aserradero; barrio in municipal district of Cobre, province of Santiago. Population 459.

Aserradero, Arroyo; stream in southern part of municipal district of Cobre, province of Santiago.

Asiendo, Arroyo del; right-hand branch of Rio Magibacoa, in municipal district of Holguin, province of Santiago.

Asiento; barrio in municipal district of Cuevitas, province of Matanzas. Population 509.

Asiento Viejo; barrio in municipal district of Esperanza, province of Santa Clara. Population 576.

Asuncion; barrio in municipal district of Jovellanos, province of Matanzas. Population 427.

Auras; village on south coast of province of Santa Clara, in municipal district of Cienfuegos.

Auras; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 437.

Auras; barrio in municipal district of Sabanilla, province of Matanzas.

Auras; barrio in municipal district of Holguin, province of Santiago. Population 1,604.

Avalo, Punta; point on southern coast of province of Santa Clara.

Ay, Rio de; right-hand branch of Rio Manati, province of Santa Clara.

Ayala, Rio; river of Habana province, flowing to north coast.

Azul, Arroyo; left-hand branch of Arroyo Negro, in Cienago Zapata, in province of Matanzas.

Azul, Laguna; small lake in western part of province of Santa Clara.

Azules, Punta Los; point on northeast coast of province of Santiago.

Babatuaba, Rio; river flowing to west coast in municipal district of Bayamo, Santiago Province. Length 25 miles.

Babiney; barrio in municipal district of Jiguani, province of Santiago. Population 2,766.

Babiney, Prieto; barrio in municipal district of San Nicolas, province of Habana.

Babuley; village in municipal district of Jiguani, Santiago Province.

Baconao, Rio; river between municipal districts of Guantanamo and Santiago de Cuba, province of Santiago. Length 15 miles.

Baconao, Surgidero de; anchorage on southern coast of province of Santiago.

Bacuino, Rio; small left-hand branch of Rio Zaza, province of Santa Clara.

Bacunagua, Rio; river in province of Pinar del Rio. Heads in Sierra de Limones and flows southeastward to the coast. Length 25 miles.

Bacunaguas; barrio in municipal district of Los Palacios, province of Pinar del Rio.

Bacunayagua; barrio in municipal district of Matanzas, province of Matanzas.

Bacuranao; village in Habana Province.

Bacuranao; barrio in municipal district of Guanabacoa, province of Habana. Population 1,457.

Bacuranao, Rio; river in Habana Province, flowing to the north coast.

Baez; barrio in municipal district of Santa Clara, province of Santa Clara. Population 1,456.

Baez, Lomas de; hills in municipal district of Santa Clara, province of Santa Clara.

Baez, Ensenada de; small bay on northern coast of province of Santiago.

Baez, Punta de; point on north coast of province of Santiago.

Baga; barrio in municipal district of Nuevitas, province of Puerto Principe. Population 277.

Bagaez; barrio in municipal district of Nueva Paz, province of Habana. Population 1,229.

Baguano; village in municipal district of Holguin, province of Santiago.

Baguano, Rio; right-hand branch of Rio Tacajo, in Santiago Province.

Bahia Honda; municipal district in province of Pinar del Rio. Area 286 square miles. Population 2,117.

Bahia Honda; village near north coast in municipal district of Bahia Honda, province of Pinar del Rio.

Bahia Honda; barrio in municipal district of Bahia Honda, province of Pinar del Rio.

Bainoa; municipal district in province of Habana. Area 11 square miles. Population 1,725.

Bainoa; village in Habana Province.

Bainoa; barrio in municipal district of Bainoa, province of Habana.

Bainoa, Arroyo; short left-hand branch of Rio Jiguey, in province of Puerto Principe.

Baiquiri, Arroyo; small stream flowing to coast in municipal district of Santiago de Cuba, province of Santiago.

Baiquiri, Surgidero; anchorage on south coast of municipal district of Santiago de Cuba, province of Santiago.

Baire; village in municipal district of Jiguani, Santiago Province.

Baire; barrio in municipal district of Jiguani, province of Santiago. Population 2,972.

Baire, Arroyo; left-hand branch of Rio Contramaestra, in municipal district of Jiguani, Santiago Province.

Baitiquiri; village in southeastern part of municipal district of Guantanamo, province of Santiago.

Baitiquiri, Punta; point on southern coast of province of Santiago.

Baitiquiri; barrio in municipal district of Guantanamo, province of Santiago. Population 164.

Baja; village near coast in municipal district of Mantua, province of Pinar del Rio.

Baja; barrio in municipal district of Mantua, province of Pinar del Rio. Population 3,741.

Baja, Laguna de; small lake in municipal district of Cienfuegos, southern part of province of Santa Clara.

Baja, Rio de; river flowing to coast in western part of province of Pinar del Rio.

Balboa, Arroyo; small right-hand branch of Arroyo Limpio Grande, in province of Puerto Principe.

Ballenato, Punta; point on north coast of Habana Province.

Bamburanao; barrio in municipal district of Yaguajay, province of Santa Clara. Population 931.

Bamburanao, Sierra de; mountains near north coast in province of Santa Clara.

Banaguises; village in municipal district of San Jose de los Ramos, province of Matanzas.

Banaguises, Pueblo; barrio in municipal district of San Jose de los Ramos, province of Matanzas. Population 931.

Banaguises, Rural; barrio in municipal district of San Jose de los Ramos, province of Matanzas. Population 2,046.

Banao; village on river of same name in province of Santa Clara.

Banao; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 436.

Banao, Lomas de; hills in southern part of province of Santa Clara, municipal district of Sancti Spiritus.

Banao, Rio; river flowing to south coast in municipal district of Sancti Spiritus, province of Santa Clara.

Banes; village in eastern part of municipal district of Gibara, province of Santiago.

Banes; village in municipal district of Guanajay, in northern part of province of Pinar del Rio.

Banes; barrio in municipal district of Gibara, province of Santiago. Population 5,730.

Banes; barrio in municipal district of Guayabal, province of Pinar del Rio.

Banes, Bahia de; bay on north coast of province of Santiago.

Banes, Punta; point on north coast of province of Pinar del Rio.

Banes, Rio; short river flowing into bay of same name in northern part of province of Santiago.

Bano; barrio in municipal district of Guantanamo, province of Santiago. Population 838.

Baños; barrio in municipal district of Cartagena, province of Santa Clara.

Banza, Punta; point on north coast of Habana Province.

Baracaldo; barrio and village in municipal district of Santo Domingo, province of Santa Clara.

Baracoa; municipal district in province of Santiago. Area 1,676 square miles. Population 21,944.

Baracoa; city on east coast of province of Santiago. First settlement in Cuba. Population 4,937.

Baracoa; barrio and village in municipal district of Bauta, province of Habana.

Baracoa; barrio in municipal district of San Luis, province of Pinar del Rio. Population 1,085.

Barajagua; barrio in municipal district of Caney, province of Santiago. Population 174.

Barajagua; barrio in municipal district of Mayari, province of Santiago. Population 723.

Barba, Rio; right-hand branch of Toa River, in Santiago Province.

Barbacoa; village in municipal district of San Luis, province of Pinar del Rio.

Barbudo; barrio in municipal district of San Nicolas, province of Habana. Population 736.

Barcos, Ensenada de los; small bay on northwest coast of Isla de Pinos.

Barcos, Punta de los; point on north coast of Isla de Pinos.

Bariai; barrio in municipal district of Gibara, province of Santiago. Population 1,047.

Bariai; village on river of same name in municipal district of Gibara, province of Santiago.

Bariai, Rio; river in municipal district of Gibara, province of Santiago, flowing into Bariai Bay.

Bariai, Ensenada; small bay on north coast of Santiago Province, municipal district of Gibara.

Bariguita, Punta; point on north coast of province of Santiago.

Barlovento, Punta; point on north coast of province of Pinar del Rio, at entrance of Bahia Manel.

Barlovento, Punta; point on north coast of province of Puerto Principe.

Barrancas; town on Rio Buey, in western part of municipal district of Bayamo, province of Santiago.

Barrancas; barrio in municipal district of Bayamo, province of Santiago. Population 1,596.

Barranco, Arroyo de; left-hand branch of Rio Cauto, in municipal district of Jiguani, Santiago Province.

Barrera, Monte; hill near north coast of Habana Province.

Barreto; barrio in municipal district of Managua, province of Habana.

Barricas, Punta; point on north coast of Isla de Pinos.

Barrigones; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Barrigones; barrio in municipal district of San Luis, province of Pinar del Rio. Population 544.

Barrilejo, Arroyo; small right-hand branch of Rio Santa Rosa, in western part of province of Pinar del Rio.

Barro; barrio in municipal district of Cifuentes, province of Santa Clara. Population 279.

Barro, Arroyo; small branch of Rio Agabama, in municipal district of Santa Clara, province of Santa Clara.

Bartola, Lomas la; hills in western part of Holguin, province of Santiago.

Bartolme; village near city of Remedios, in northern part of province of Santa Clara.

Bartolme; barrio in municipal district of San Juan de los Remedios, province of Santa Clara. Population 512.

Bartolo, Loma de; hill in municipal district of Mantua, near west coast of province of Pinar del Rio.

Basilio, Caleta del Tio; cove on north coast of province of Santiago, municipal district of Gibara.

Batabano; municipal district in province of Habana. Area 70 square miles. Population 6,523.

Batabano; barrio and city in municipal district of Batabano, province of Habana. Population 1,025.

Batalla; village in southern part of province of Matanzas.

Batalla; barrio in municipal district of Macuriges, province of Matanzas. Population 795.

Bauta; municipal district in province of Habana. Area 76 square miles. Population 5,142.

Bayamo; municipal district in province of Santiago. Area 1,034 square miles. Population 21,193.

Bayamo; city in interior of Santiago. Population 3,022.

Bayamo, Rio; left-hand branch of Rio Cauto, in southern part of Santiago Province, heading in Sierra Maestra.

Bayatabo, Loma; hill in western part of municipal district of Nuevitas, province of Puerto Principe.

Bayate; barrio and village in municipal district of Candelaria, province of Pinar del Rio.

Bayate, Rio; river flowing to south coast in province of Pinar del Rio.

Bazan; village in northern part of municipal district of Sagua de Tanamo, province of Santiago.

Bazan; barrio in municipal district of Sagua de Tanamo, province of Santiago. Population 781.

Bejucal; municipal district in province of Habana. Area 36 square miles. Population 5,756.

Bejucal; an interior city of Habana Province. Population 4,828.

Bejucal, Sierra del; hills in Habana Province.

Bejuco, Arroyo; left-hand branch of Rio Cauto, municipal district of Mayari, province of Santiago.

Bejuco, Arroyo; stream in western part of municipal district of Puerto Padre, Santiago Province.

Belen; barrio in municipal district of Santiago de Cuba, province of Santiago. Population 6,365.

Belig; town on southwestern coast of province of Santiago, in municipal district of Niquero.

Bellamota; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 931.

Beltrami; barrio in municipal district of Bejucal, province of Habana.

Beltran, Loma; hills in municipal district of Guantanamo, province of Santiago.

Berineja, Loma de la; hills near city of Colon, in province of Matanzas.

Bernardino, Arroyo; right-hand branch of Rio Santa Fe, in eastern part of Isla de Pinos.

Bernia; village in municipal district of San Jose de las Yeras, province of Santa Clara.

Bernia; barrio in municipal district of San Juan de las Yeras, province of Santa Clara. Population 613.

Bermeja; barrio in municipal district of Cabezas, province of Matanzas. Population 1,871.

Berraco, Punta; point on southern coast of province of Santiago, municipal district of Santiago de Cuba.

Berraco, Rio; river flowing to north coast of municipal district of Sagua de Tanamo, province of Santiago.

Berracos; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio. Population 1,056.

Berracos, Punta; point on north coast of province of Pinar del Rio.

Biajacas, Arroyo; small right-hand branch of Rio Muñoz, in province of Puerto Principe.

Biajacas, Arroyo; right-hand branch of Arroyo Curajaya, in southern part of province of Puerto Principe.

Biajacas, Ensenada; small bay on west coast of province of Pinar del Rio.

Biajacas, Rio; river flowing to coast in western part of province of Pinar del Rio.

Biaro, Punta; point on north coast of province of Puerto Principe.

Biaya, Sierra de; mountains in southern part of municipal district of Puerto Principe, province of Puerto Principe.

Bibijagua, Punta de la; point on north coast of Isla de Pinos.

Bicana; town on west coast of province of Santiago, municipal district of Manzanillo.

Bicana, Rio; river flowing to west coast in municipal district of Manzanillo, Santiago Province.

Bija; barrio in municipal district of Cabezas, province of Matanzas. Population 751.

Bija, Rio; river in Habana Province.

Bijaru; village in municipal district of Holguin, province of Santiago.

Bijaru; barrio in municipal district of Holguin, province of Santiago. Population 2,152.

Bijaru, Loma de; hills in municipal district of Holguin, province of Santiago.

Bijaru, Rio; left-hand branch of Tajacon River, in municipal district of Holguin, province of Santiago.

Bio, Rio; right-hand branch of Rio Cauto, in municipal district of Mayari, province of Santiago.

Birama, Lagunas de; small lakes in western part of municipal district of Puerto Padre, province of Santiago.

Birama, Rio; right-hand tributary of Rio Cauto, in Santiago province. Length 30 miles.

Biran; barrio in municipal district of Mayari, province of Santiago. Population 529.

Blanca, Arroyo; branch of Arroyo del Mulato in municipal district of Puerto Principe, province of Puerto Principe.

Blanca, Laguna; small lake in western part of municipal district of Holguin, province of Santiago.

Blanca, Punta; point on northern coast of Isla de Turiguano, province of Puerto Principe.

Blanca, Punta; point on island of Conuco, north of province of Santa Clara.

Blanco, Arroyo; left-hand branch of Rio los Perros, near north coast of Puerto Principe.

Blanco, Arroyo; small branch of Rio Salado, in municipal district of Holguin, province of Santiago.

Blanco, Cabo; cape on west coast of province of Santiago.

Blanco, Caleton; cove on coast of municipal district of Cobre, southern part of province of Santiago.

Blanco, Cayo; islet off south coast of municipal district of Trinidad, province of Santa Clara.

Blanco, Cayo; islet off south coast of province of Santa Clara, municipal district of Sancti Spiritus.

Blanco, Cayo; islet off north coast of province of Pinar del Rio.

Blanco, Cayos; islands north of province of Matanzas.

Blanco del Sur, Cayo; island off south coast of province of Santa Clara.

Blanco, Monte; hill on north coast in Habana Province.

Blanco, Pico; peak near south coast in municipal district of Cienfuegos, province of Santa Clara.

Blanco, Rio; river in western part of province of Matanzas.

Blanco, Rio; short right-hand branch of Rio Yaleras, province of Santiago.

Blanco, Rio; branch of Rio Jaruco in Habana Province.

Blanquisal; town on western coast of Santiago Province, in municipal district of Manzanillo.

Blanquisal; barrio in municipal district of Manzanillo, province of Santiago. Population 1,040.

Blanquizar, Arroyo; short branch of Arroyo de la Vaca in province of Puerto Principe.

Blanquizar; hills in northern part of Puerto Padre, province of Santiago.

Bobo, Punto and Arroyo; point and creek on north coast of Isla de Pinos.

Boca; barrio in municipal district of Mariel, province of Pinar del Rio.

Boca de Jaruco; village in Habana Province, on north coast.

Boca de Santa Cruz; village on north coast of Habana Province.

Bocas; barrio in municipal district of Gibara, province of Santiago.

Bolanos, Montes de; mountains in municipal district of Alto Songo, province of Santiago.

Bolija; village in municipal district of Cobre, province of Santiago.

Bolondron; municipal district in province of Matanzas. Area 267 square miles. Population 9,179.

Bolondron; an interior city of Matanzas. Population 2,604.

Boniato; village in municipal district of Alto Songo, province of Santiago.

Bonito, Cayo; islet south of province of Santa Clara.

Boquerones, Arroyo; branch of Rio Santo Domingo in province of Matanzas.

Borigo, Arroyo; left-hand branch of Rio Contramaestra in municipal district of Jiguani, province of Santiago.

Borroto, Lomas de; hills in Habana Province.

Borton, Punta; point on west coast of municipal district of Niquero, province of Santiago.

Bosque; village in municipal district of San Antonio de las Vueltas, province of Santa Clara.

Bosque; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 2,019.

Botija; barrio in municipal district of Cobre, province of Santiago. Population 324.

Botija, Arroyo la; small left-hand branch of Rio Manati, province of Santa Clara.

Boyeros; barrio in municipal district of Santiago de las Vegas, province of Habana. Population 1,553.

Braguetudos; barrio in municipal district of Mayari, province of Santiago. Population 1,454.

Brama, Rio; short river flowing to coast in municipal district of Niquero, Santiago Province.

Brava, Punta; point on north coast of Santiago Province, municipal district of Gibara.

Brava, Punta; point on north coast of Santiago Province.

Brava, Punta; point on north coast of province of Puerto Principe.

Brava, Punta; point on south coast of municipal district of Niquero, province of Santiago.

Brava, Punta; point on south coast of Isla de Pinos.

Brazo Cauto; barrio in municipal district of Cobre, province of Santiago. Population 1,150.

Brazo, Arroyo del; left-hand branch of Rio Los Perros, near north coast of province of Puerto Principe.

Brazo de Abajo; short branch of Rio Turquina in province of Santiago.

Brazo del Pinal; small stream uniting with Brazo Seco to form Toa River in Santiago Province.

Brazo Izquierdo; short branch of Rio Turquina in municipal district of Bayamo, province of Santiago.

Brazo Seco; small stream uniting with Brazo del Pinal to form Toa River in Santiago Province.

Broa, Ensenada de; bay on south coast, touching provinces of Habana, Matanzas and Santa Clara.

Brujo, Lomas del; hills in northern part of province of Pinar del Rio.

Buena Esperanza, Bahia; bay in southern part of island, west of province of Santiago.

Buenaventura; town near southern coast in province of Puerto Principe, municipal district of Santa Cruz del Sur.

Buenaventura; village in Habana Province.

Buenaventura; barrio in municipal district of Santa Cruz del Sur, province of Puerto Principe. Population 352.

Buenavista; village in municipal district of San Juan de los Remedios, northern part of province of Santa Clara.

Buenavista; village in municipal district of Macagua, province of Matanzas.

Buenavista; barrio in municipal district of San Juan de los Remedios, province of Santa Clara. Population 4,071.

Buenavista, Rio; river flowing to western coast in province of Pinar del Rio.

Buenavista, Cayo de; island west of province of Pinar del Rio.

Buenavista, Punta de; point on west coast of Isla de Pinos.

Buenos Aires, Lomas; hills in municipal district of Pinar del Rio, province of Pinar del Rio.

Buey, Rio; river flowing to west coast in Santiago Province.

Buey, Ensenada de; small bay on west coast of province of Santiago, municipal district of Bayamo.

Bueycito; barrio and village in municipal district of Bayamo, province of Santiago. Population of barrio 1,590.

Bufeo, Laguna del; lake in municipal district of Guane, southern part of province of Pinar del Rio.

Bufeo, Punta del; point on east coast of province of Santiago.

Buiquiri; village in municipal district of Santiago de Cuba, province of Santiago.

Burro, Arroyo del; right-hand branch of Rio Santa Barbara in province of Matanzas.

Burro, Cayo; islet off north coast of municipal district of Baracoa, province of Santiago.

Burro, Lomas del; hills near south coast in municipal district of Trinidad, province of Santa Clara.

Cabacu; barrio in municipal district of Baracoa, province of Santiago. Population 715.

Cabagan; village on south coast of municipal district of Trinidad, province of Santa Clara.

Cabagan; barrio in municipal district of Trinidad, province of Santa Clara. Population 762.

Cabagan, Lomas de; hills in southern part of province of Santa Clara, municipal district of Trinidad.

Cabagan, Rio; river flowing to southern coast in municipal district of Trinidad, province of Santa Clara.

Cabaiguan; village in municipal district of Sancti Spiritus, province of Santa Clara.

Cabaiguan; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 1,135.

Caballero, Rio; right-hand branch of Rio Tayaba, in southern part of province of Santa Clara.

Caballos, Punta; point on south coast of Habana Province.

Caballos, Sierra de; mountains in northern part of Isla de Pinos.

Cabañas; municipal district in province of Pinar del Rio. Area 89 square miles. Population 3,853.

Cabañas; barrio in municipal district of Cabañas, province of Pinar del Rio.

Cabañas, Bahia; bay on north coast of province of Pinar del Rio.

Cabañas, Punta; point on northeast coast of municipal district of Sagua de Tanamo, province of Santiago.

Cabañas, Surgidero de; anchorage on coast of municipal district of Cobre, southern part of Santiago Province.

Cabezadas de Arroyo; spur of Sierra Maestra, province of Santiago.

Cabeza del Cerro, Punta; point on north coast of province of Santiago.

Cabeza del Muerto; hills near southern coast in province of Santa Clara.

Cabeza de Vaca, Punta; point on north coast of Habana province.

Cabezas; municipal district in province of Matanzas. Area 96 square miles. Population 5,184.

Cabezas; an interior city of Matanzas. Population 1,721.

Cabezas; barrio in municipal district of Mantua, province of Pinar del Rio.

Cabezas; barrio and village in municipal district of Pinar del Rio, province of Pinar del Rio. Population of barrio 1,521.

Cabezas, Valle de; valley in Sierra Organos, municipal district of Pinar del Rio, province of Pinar del Rio.

Cabezos, Cayo de las; islet north of province of Santa Clara.

Cabezuela, Rio; short branch of Rio Salado, in municipal district of Holguin, province of Santiago.

Cabo Cruz; barrio in municipal district of Niquero, province of Santiago.

Cabo de San Antonio; barrio in municipal district of Guane, province of Pinar del Rio. Population 270.

Cabonico; village in municipal district of Mayari, province of Santiago.

Cabonico; barrio in municipal district of Mayari, province of Santiago. Population 683.

Cabras, Cerro de; hill in municipal district of Pinar del Rio, province of Pinar del Rio.

Cabrera, Punta; point on south coast of Santiago, municipal district of Cobre.

Cabreras, Rio; river heading in Loma de Ajenjibre and flowing north between the provinces of Santiago and Puerto Principe to coast. Length 35 miles.

Cabriales; barrio in municipal district of Guanajay, province of Pinar del Rio. Population 533.

Cacao, Cayo; islet south of province of Santa Clara.

Cacarajicaras; village in municipal district of Bahia Honda, northern part of province of Pinar del Rio.

Cacarajicaras, Sierra de; mountains in northern part of province of Pinar del Rio.

Cacarrala, Sierra de; mountains in western part of province of Puerto Principe.

Cacocum; village in municipal district of Holguin, province of Santiago.

Cacuyaguin, Rio; river in northern part of province of Santiago, flowing to coast through municipal district of Gibara.

Caguaguas; barrio in municipal district of Quemado de Guines, province of Santa Clara. Population 540.

Caguanes, Arroyo; small left-hand branch of Rio Caguanes in northern part of province of Santa Clara.

Caguanes, Punta; point on northern coast of province of Santa Clara.

Caguanes, Rio; river flowing to north coast in municipal district of Yaguajay, province of Santa Clara.

Caguanes, Rio; stream flowing to coast in northeastern part of province of Santa Clara.

Caguanes, Sierra de; mountains on north coast of province of Santa Clara, municipal district of Yaguajay.

Cagunigua, Rio; stream in northern part of municipal district of Baracoa, province of Santiago.

Caibarien; municipal district in province of Santa Clara. Area 55 square miles. Population 8,650.

Caibarien; city on north coast of province of Santa Clara. Population 7,013.

Caibarien; barrio in municipal district of Caibarien, province of Santa Clara. Population 7,013.

Caiguanabo; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio. Population 439.

Caiguanabo, Rio; river flowing to south coast in province of Pinar del Rio. Length 22 miles.

Caiman, Cayo; small island north of Cayo Romano, province of Puerto Principe.

Caiman, Punta; point on north coast of province of Pinar del Rio.

Caimanera; village in municipal district of Cienfuegos, province of Santa Clara.

Caimanera; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 717.

Caimanera; barrio in municipal district of Guantanamo, province of Santiago. Population 620.

Caimanera, Ensenada; small bay on west coast of municipal district of Manzanillo, province of Santiago.

Caimanera, Punta; point on west coast of municipal district of Manzanillo, Santiago Province.

Caimanes; village in municipal district of Cobre, province of Santiago.

Caimanes; barrio in municipal district of Cobre, province of Santiago. Population 698.

Caimasan, Arroyo; branch of Arroyo los Pasos, in municipal district of Holguin, province of Santiago.

Caimiabo, Rio; river flowing to south coast in province of Santa Clara. Length 20 miles.

Caimito; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Caimito; barrio in municipal district of Guayabal, province of Pinar del Rio. Population 1,269.

Caimito; barrio in municipal district of San Nicolas, province of Habana.

Caimitos; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

Cajio; barrio in municipal district of Guira de Melena, province of Habana. Population 963.

Cajon, Punta del; point on north coast of San Antonio peninsula, province of Pinar del Rio.

Cajuare, Punta; point on north coast of province of Santiago.

Calabaza, Arroyo; small stream in municipal district of Holguin, province of Santiago.

Calabazar; municipal district in province of Santa Clara. Area 279 square miles. Population 13,419.

Calabazar; an interior city of Santa Clara. Population 1,575.

Calabazar; village in municipal district of Holguin, Santiago Province.

Calabazar; village in Habana Province.

Calabazar; barrio in municipal district of Jiguani, province of Santiago. Population 655.

Calabazar; barrio in municipal district of Santiago de las Vegas, province of Habana. Population 1,152.

Calabazar, Arroyo; small branch of Arroyo del Lindero, province of Puerto Principe.

Calabazas; barrio in municipal district of Sagua de Tanamo, province of Santiago Population 952.

Calabazas, Rio; right-hand branch of Rio Zaza, province of Santa Clara.

Calazo; village in western part of municipal district of Sagua de Tanamo, province of Santiago.

Caldera, Punta de la; point on north coast of Isla de Turiguano, province of Puerto Principe.

Calderon; village in municipal district of Holguin, Santiago Province.

Caleta, Punta; point on north coast of Santiago Province, municipal district of Gibara.

Caleta, Punta de; point on southeast coast of province of Santiago.

Caleta Grande; barrio in municipal district of Isla de Pinos, province of Habana. Population 315.

Calicito; town near west coast of province of Santiago, municipal district of Manzanillo.

Calicito; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 499.

Calicitos; barrio in municipal district of Manzanillo, province of Santiago. Population 738.

Calienta Rabo, Lomas; hills in municipal district of Bahia Honda, province of Pinar del Rio.

Calimete; village in municipal district of Colon, province of Matanzas.

Calimete; barrio in municipal district of Colon, province of Matanzas. Population 3,274.

Caliver, Surgidero de; anchorage on coast of municipal district of Cobre, southern part of province of Santiago.

Callejon, Rio del; left-hand branch of Rio de las Nuevas, Isla de Pinos.

Calvario; barrio in municipal district of Habana, province of Habana. Population 1,041.

Calzada; barrio in municipal district of Santa Cruz del Sur, province of Puerto Principe.

Calzoncillo, Alto del; hills in northern part of municipal district of Mayari, province of Santiago.

Camacho, Arroyo; right-hand branch of Rio Piedras, in northern part of province of Matanzas.

Camacho, Punta de; point on north coast of province of Matanzas.

Camajan, Loma de; hills in western part of municipal district of Nuevitas, province of Puerto Principe.

Camajan, Rio; left-hand branch of Rio Bariai, in municipal district of Gibara, province of Santiago.

Camajuani; municipal district in province of Santa Clara. Area 100 square miles. Population 14,495.

Camajuani; an interior city of Santa Clara. Population 5,082.

Camajuani, Rio; right-hand branch of Rio Sagua la Chica, in province of Santa Clara.

Camarones; village in municipal district of Guantanamo, province of Santiago.

Camarones; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

Camarones; barrio in municipal district of Guantanamo, province of Santiago. Population 757.

Camarones, Rio; left-hand branch of Rio San Anton in province of Matanzas.

Camarones, Rio; river flowing to west coast in province of Pinar del Rio.

Camarones, Rio; right-hand branch of Rio Sagua la Chica, in province of Santa Clara.

Camasan; barrio in municipal district of Holguin, province of Santiago. Population 1,257.

Camasan; village in municipal district of Holguin, province of Santiago.

Cambute; barrio in municipal district of Santa Maria del Rosario, province of Habana.

Camejo, Arroyo; right-hand branch of Arroyo Guarano del Brazo in province of Puerto Principe.

Camoa, Loma; hill in Habana Province.

Campa, Arroyo; small coast stream in municipal district of Cabairien, northern part of province of Santa Clara.

Campana; village and barrio in municipal district of Matanzas, province of Matanzas.

Campana, Lomas la; hills in western part of municipal district of Moron, province of Puerto Principe.

Campanarios, Punta de; point on Zapata Peninsula, south coast of province of Santa Clara.

Campantaros, Arroyo; an outlet of lake of same name flowing to south coast in province of Pinar del Rio.

Campantarras, Laguna; small lake in municipal district of Pinar del Rio, province of Pinar del Rio.

Campechuela; municipal district in province of Santiago. Area 51 square miles. Population 7,369.

Campechuela; city on south coast of province of Santiago. Population 3,254.

Campo Florido; village in Habana Province.

Campo Florido; barrio in municipal district of Guanabacoa, province of Habana. Population 591.

Campos, Cayos; small islands east of Isla de Pinos.

Caña; village near coast in municipal district of Manzanillo, province of Santiago.

Caña, Ensenada de la; small bay on west coast of province of Pinar del Rio.

Caña, Punta de; point on north coast of Santiago Province.

Caña, Rio; left-hand branch of Jauco River in eastern part of Santiago Province.

Cañada, Sierra de la; mountains in western part of Isla de Pinos.

Canal Nuevo, Cayos de; small islands north of province of Puerto Principe.

Cañanas, Rio; small river in western part of Matanzas.

Cañanoba, Rio; stream in municipal district of Sagua de Tanamo, province of Santiago, flowing to north coast.

Cañanoba, Ensenada; small bay on north coast of municipal district of Sagua de Tanamo, province of Santiago.

Canapu, Rio; right-hand branch of Rio Nipe, in Santiago Province.

Canarioco; barrio in municipal district of Matanzas, province of Matanzas. Population 814.

Cañas; barrio in municipal district of Artemisa, province of Pinar del Rio. Population 984.

Cañas, Loma de las; hill in municipal district of San Juan y Martinez, province of Pinar del Rio.

Cañas, Punta de; point on north coast of province of Santiago.

Cañas, Rio; right-hand branch of Rio Limones in northern part of province of Santa Clara.

Cañas, Rio; right-hand branch of Rio Cauto, in southern part of province of Santiago.

Cañas, Rio Las; stream flowing to south coast in municipal district of Trinidad, province of Santa Clara.

Canasi; municipal district in province of Matanzas. Area 62 square miles. Population 1,993.

Canasta, Arroyo; right-hand branch of Rio San Felipe, southern part of province of Pinar del Rio.

Canasta, Lomas de la; hills in western part of municipal district of Guantanamo, province of Santiago.

Candela Norte; barrio in municipal district of Guines, province of Habana.

Candela Sur; barrio in municipal district of Guines, province of Habana.

Candela, Lomas de; hills in Habana Province.

Candela, Baja; barrio in municipal district of Guines, province of Habana.

Candelaria; municipal district in province of Pinar del Rio. Area 203 square miles. Population 4,866.

Candelaria; village in municipal district of Gibara, province of Santiago.

Candelaria; barrio in municipal district of Gibara, province of Santiago. Population 436.

Candelaria; barrio in municipal district of Candelaria, province of Pinar del Rio. Population 1,697.

Candelaria, Cerro de; mountain in northern part of municipal district of Gibara, province of Santiago.

Canete; village in northern part of municipal district of Baracoa, province of Santiago.

Canete; barrio in municipal district of Baracoa, province of Santiago. Population 322.

Caney; municipal district in province of Santiago. Area 201 square miles. Population 9,126.

Caney; barrio in municipal district of Caney, province of Santiago. Population 844.

Caney, Punta del; point on south coast of province of Santa Clara.

Cangre; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Cangre; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 4,208.

Cangrejeras; village in Habana Province.

Cangrejeras; barrio in municipal district of Bauta, province of Habana.

Cangrejo; barrio in municipal district of San Juan de los Remedios, province of Santa Clara.

Cangrejo, Rio; small branch of Rio Manati, in municipal district of Trinidad, province of Santa Clara.

Canimar; barrio in municipal district of Guamacaro, province of Matanzas. Population 161.

Canimar; barrio in municipal district of Matanzas, province of Matanzas.

Canimar; barrio in municipal district of Sabanilla, province of Matanzas.

Canizo, Rio; small stream flowing to coast in municipal district of Cobre, province of Santiago.

Cano; municipal district in province of Habana. Area 26 square miles. Population 4,210.

Cano; barrio in municipal district of Cano, province of Habana.

Cano; barrio in municipal district of Manzanillo, province of Santiago. Population 1,112.

Canoa; barrio in municipal district of Managua, province of Habana.

Canoa, Punta de la; point on south coast of Isla de Pinos.

Canoa, Sierra de la; mountains in northeastern part of province of Santa Clara, municipal district of Yaguajay.

Canoa, Loma; hill in western part of province of Puerto Principe, municipal district of Ciego de Avila.

Cañones, Punta; point on east coast of municipal district of Gibara, province of Santiago.

Canongo; village in northern part of province of Matanzas.

Cantel; barrio in municipal district of Cardenas, province of Matanzas.

Cantimplora; village in municipal district of Gibara, province of Santiago.

Cantimplora; barrio in municipal district of Gibara, province of Santiago. Population 515.

Caobas; town in western part of municipal district of Bayamo, province of Santiago.

Caobas; village in municipal district of Guamacaro, province of Matanzas.

Caobas; barrio in municipal district of Guamacaro, province of Matanzas. Population 1,197.

Caobas, Loma Las; hills in northern part of Santiago Province, near coast.

Caobas, Sierra de; mountains in western part of province of Matanzas.

Caobillas; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 1,728.

Capado, Punta del; point on west coast of Isla de Pinos.

Capellanias; barrio in municipal district of Artemisa, province of Pinar del Rio. Population 223.

Capellanias; barrio in municipal district of Ceiba del Agua, province of Habana.

Caperuza; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

Capitana, Punta; point on south coast of province of Pinar del Rio.

Capote; barrio in municipal district of Santa Maria del Rosario, province of Habana.

Caraballo; village in Habana province.

Caraballo; barrio in municipal district of Bainoa, province of Habana. Population 495.

Caraballo; village in municipal district of San Diego de los Baños, province of Pinar del Rio.

Caracusey; village in municipal district of Trinidad, province of Santa Clara.

Caracusey; barrio in municipal district of Trinidad, province of Santa Clara. Population 676.

Caracusey, Rio; left-hand branch of Rio Manati, province of Santa Clara.

Carahates; village near north coast in municipal district of Quemado de Guines, province of Santa Clara.

Carahates; barrio in municipal district of Quemado de Guines, province of Santa Clara. Population 1,615.

Carambola; village and barrio in municipal district of Candelaria, province of Pinar del Rio.

Carapachivey, Caleta; small bay on south coast of Isla de Pinos.

Carapacho, Punta; point on south coast of province of Puerto Principe, municipal district of Moron.

Caravela Grande; point on north coast of San Antonio Peninsula, province of Pinar del Rio.

Caravelas, Rio de las; river in province of Puerto Principe. Heads in Yucatan hills and flows northeast to coast. Length 28 miles.

Carboneras; barrio in municipal district of Santa Cruz del Norte, province of Habana.

Cardenas; municipal district in province of Matanzas. Area 56 square miles. Population 24,861.

Cardenas; city on north coast of province of Matanzas. Population 21,940.

Cardenas, Bahia; bay on north coast of province of Matanzas.

Careges, Arroyo; right-hand branch of Yumuri River in Santiago Province.

Carena, Cayo; islet south of province of Santa Clara.

Carenero, Cayo; island north of province of Santa Clara.

Caribo, Punta; point on south coast of province of Pinar del Rio.

Caridad; village in municipal district of Guantanamo, province of Santiago.

Caridad; village in municipal district of Holguin, province of Santiago.

Caridad; barrio in municipal district of Guantanamo, province of Santiago. Population 516.

Carlos Maria, Laguna; lake near north coast in province of Santa Clara, municipal district of Calabazar.

Carlos Rojas; municipal district in province of Matanzas. Area 71 square miles. Population 3,174.

Carlota, Monte la; hill in Habana Province.

Carmen; barrio in municipal district of Santa Clara, province of Santa Clara. Population 3,051.

Carmen, Lomas del; hills in Habana Province.

Carolina; barrio in municipal district of San Juan de los Remedios, province of Santa Clara. Population 358.

Carraguao, Punta de; point on south coast of province of Pinar del Rio.

Carrasco, Lomas de; hills in Habana Province.

Carrasco, Rio; river in province of Puerto Principe. Heads in Sierra de Najasa and flows southeastward to coast. Length 35 miles.

Carrederias; barrio in municipal district of Santa Cruz del Norte, province of Habana.

Cartagena; municipal district in province of Santa Clara. Area 180 square miles. Population 6,244.

Cartagena; barrio in municipal district of Cartagena, province of Santa Clara. Population 1,917.

Cartas, Punta de; point on south coast of province of Pinar del Rio.

Casas, Laguna las; small lake near coast in municipal district of Guane, province of Pinar del Rio.

Cascajal; barrio in municipal district of Cartagena, province of Santa Clara. Population 2,017.

Cascorro; town in municipal district of Puerto Principe, province of Puerto Principe.

Cascorro; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 1,904.

Cascorro, Rio; river in province of Puerto Principe. Heads in Loma de Sibanicu and flows northeast to coast. Length 30 miles.

Casiguas; municipal district in province of Habana. Area 22 square miles. Population 1,004.

Casiguas; village in Habana Province.

Casiguas, Cayo; small island north of province of Pinar del Rio.

Casilda; village near city of Trinidad, on south coast of province of Santa Clara.

Casilda; barrio in municipal district of Trinidad, province of Santa Clara. Population 2,234.

Casilda, Punta; point on south coast of province of Santa Clara.

Casimba; barrio in municipal district of Guatanamo, province of Santiago. Population 537.

Casimba Arriba; village in northern part of municipal district of Guantanamo, province of Santiago.

Casimba, Punta; point on southwest coast of province of Santiago.

Caisimu; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,653.

Casisey; village in municipal district of Guantanamo, province of Santiago.

Casisey Abajo; village in municipal district of Guantanamo, province of Santiago.

Casisey Abajo; barrio in municipal district of Guantanamo, province of Santiago. Population 508.

Casisey Arriba; barrio in municipal district of Guantanamo, province of Santiago. Population 443.

Castal, Lomas del; hills in western part of province of Puerto Principe, municipal district of Ciego de Avila.

Castillo; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 1,383.

Castro, Rio; river in municipal district of Sagua de Tanamo, province of Santiago.

Catal, Arroyo; small left-hand branch of Rio Cauto, province of Santiago.

Catalina; municipal district in province of Habana. Area 92 square miles. Population 2,718.

Catalina; village and barrio in municipal district of Guane, province of Pinar del Rio.

Catedral; barrio in municipal district of Santiago de Cuba, province of Santiago. Population 5,152.

Caunao; village near city of Cienfuegos, in southern part of province of Santa Clara.

Caunao; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 3,597.

Caunao, Arroyo; small left-hand branch of Rio Zaza, in municipal district of Sancti Spiritus, province of Santa Clara.

Caunao, Lagunas de; chain of small lakes near north coast of province of Santa Clara, in municipal district of Calabazar.

Caunao, Loma; hills in northern part of municipal district of Puerto Principe, province of Puerto Principe.

Caunao, Punta; point on north coast of province of Puerto Principe.

Caunao, Rio; river rising in western part of municipal district of Puerto Principe, province of Puerto Principe, and flowing northwestward and northward to coast. Length 55 miles.

Caunao, Rio; left-hand branch of Rio Zaza in northern part of province of Santa Clara.

Caunao, Rio; river flowing into Cienfuegos Bay, in province of Santa Clara.

Cautillo, Rio; a tributary of the Cauto River, forming a dividing line between municipal districts of Jiguani and Bayamo in Santiago Province for a distance of about 35 miles.

Cauto Embarcadero; town at head of navigation on Rio Cauto, in municipal district of Bayamo, province of Santiago.

Cauto, Lagunas de; small lakes in northern part of municipal district of Jiguani, Santiago Province.

Cauto, Rio; longest and most important river in Cuba. Heads in the northern slopes of Sierra Maestra, in southern part of Santiago Province, and flows north and west into Gulf of Buena Esperanza. It is 150 miles in length, and navigable to Cauto Embarcadero, a distance of 50 miles from its mouth.

Cauto Abajo; village in municipal district of Palma Soriano, province of Santiago.

Cauto Abajo; barrio in municipal district of Palma Soriano, province of Santiago. Population 839.

Cauto Baire; village in municipal district of Palma Soriano, province of Santiago.

Cauto Baire; barrio in municipal district of Palma Soriano, province of Santiago. Population 777.

Cauto del Embarcadero; barrio in municipal district of Bayamo, province of Santiago. Population 1,571.

Cauto del Paso; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,500.

Cayaguaneque, Arroyo; small stream flowing to north coast of municipal district of Baracoa, province of Santiago.

Cayaguani, Arroyo; left-hand branch of Rio Manati, province of Santa Clara.

Cayajabas, Laguna; small lake in San Antonio peninsula, province of Pinar del Rio.

Cayajabos; village in municipal district of Artemisa, province of Pinar del Rio.

Cayajabos; barrio in municipal district of Artemisa, province of Pinar del Rio. Population 1,022.

Cayajabos; barrio in municipal district of Madruga, province of Habana.

Cayajana, Rio; right-hand branch of Rio Zaza, province of Santa Clara.

Cayajo, Rio; right-hand branch of Rio Cauto, in western part of Santiago Province.

Cayama, Lagunas de; small lakes in municipal district of Ceja de Pablo, province of Santa Clara.

Cayamas, Arroyo; small stream on eastern coast of Isla de Pinos.

Cayamas, Punta de; point on south coast of Habana Province.

Cayos; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 113.

Cayos; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara.

Cayos de San Felipe; barrio in municipal district of Viñales, province of Pinar del Rio. Population 417.

Cayo Smith; village in municipal district of Cobre, province of Santiago.

Cayo Smith; barrio in municipal district of Cobre, province of Santiago. Population 265.

Cayuelos, Punta de los; point on south coast of province of Pinar del Rio.

Cayuelos, Punta de los; point on western coast of San Antonio peninsula, province of Pinar del Rio.

Cayueto, Punta; point on north coast of Santiago Province.

Cazenal, Punta; point on south coast of municipal district of Santiago de Cuba, province of Santiago.

Cazones, Ensenada de; bay on south coast of province of Santa Clara.

Cazuelas, Loma las; hill in municipal district of Pinar del Rio, province of Pina del Rio.

Cebollas, Punta; point on north coast of municipal district of Sagua de Tanamo, province of Santiago.

Cedran Tormenta; spur of Sierra Maestra in province of Santiago.

Cedro, Punta del; point on north coast of province of Santa Clara.

Ceiba; town in southern part of province of Puerto Principe, municipal district of Ciego de Avila.

Ceiba; barrio in municipal district of Cabanas, province of Pinar del Rio. Population 1,366.

Ceiba; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 203.

Ceiba, Arroyo de la; small branch of Arroyo de la Vaca in province of Puerto Principe.

Ceiba del Agua; municipal district in province of Habana. Area 34 square miles. Population 2,197.

Ceiba del Agua; barrio in municipal district of Ceiba del Agua, province of Habana. Population 909.

Ceiba del Agua; village in Habana Province.

Ceiba Hueca; barrio in municipal district of Campechuela, province of Santiago. Population 2,149.

Ceiba Mocha; barrio and village in municipal district of Matanzas, province of Matanzas. Population of barrio 1,828.

Ceja Borrejo, Arroyo; right-hand branch of Rio Yaguarama in southern part of province of Santa Clara.

Ceja de Anton, Arroyo; small stream flowing to west coast in province of Pinar del Rio.

Ceja de la Herradura; barrio in municipal district of Julian Diaz, province of Pinar del Rio.

Ceja de Pablo; municipal district in province of Santa Clara. Area 337 square miles. Population 6,954.

Ceja de Pablo; barrio in municipal district of Ceja de Pablo, province of Santa Clara. Population 273.

Ceja de Pablo; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 1,545.

Cenicero, Arroyo; small stream in municipal district of Puerto Padre, Santiago Province.

Centano; barrio in municipal district of Yaguajay, province of Santa Clara. Population 447.

Centeno, Arroyo; small stream in Santiago Province, flowing into Bahia de Nipe.

Centeno, Laguna; small lake in municipal district of Mayari, province of Santiago.

Central Redencion; town in municipal district of Nuevitas, province of Puerto Principe.

Centro; barrio in municipal district of Calabazar, province of Santa Clara. Population 3,756.

Centro; barrio in municipal district of San Diego del Valle, province of Santa Clara. Population 1,298.

Centro; barrio in municipal district of Santa Isabel de las Lajas, province of Santa Clara. Population 6,915.

Cerillo, Punta del; point on north coast of Isla de Turiguano, province of Puerto Principe.

Cerrito; barrio in municipal district of Santo Domingo, province of Santa Clara.

Cervantes; village in Habana Province.

Cervantes; village in municipal district of Perico, province of Matanzas.

Cervantes, Lomas de; hills in Habana Province.

Chamarreta Punta; point on the south coast of municipal district of Manzanillo, Santiago Province.

Chambas; town in northwestern part of province of Puerto Principe, municipal district of Moron.

Chambas; barrio in municipal district of Moron, province of Puerto Principe. Population 925.

Chambas, Rio de las; river in province of Puerto Principe. It heads in hills in western part of municipal district of Moron and flows north to the sea. It is known for some distance from its mouth as Los Perros. Length 27 miles.

Chaparra; barrio in municipal district of Puerto Padre, province of Santiago. Popu-1,038.

Charcas; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 736.

Charcas, Punta; point on south coast of province of Puerto Principe, municipal district of Moron.

Charco Hondo; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 1,013.

Chavaleta; barrio in municipal district of Mayari, province of Santiago. Population 1,230.

Chavez; barrio in municipal district of Rancho Veloz, province of Santa Clara. Population 1,156.

Chavez; barrio in municipal district of San Jose de las Lajas, province of Habana.

Chepalope, Arroyo; branch of Rio Almendares in Habana Province.

Chepalope, Loma; hill in Habana Province.

Chicaro; barrio in municipal district of San Antonio de los Baños, province of Habana. Population 404.

Chicharron; barrio in municipal district of Ceiba del Agua, province of Habana.

Chico, Arroyo; left-hand branch of Rio San Felipe in southern part of province of Pinar del Rio.

Chimborazo, Loma del; hill in Habana province.

Chinchila; barrio in municipal district of Sagua la Grande, province of Santa Clara. Population 1,654.

Chiquito, Arroyo; short left-hand branch of Rio de las Caravelas in municipal district of Puerto Principe, province of Puerto Principe.

Chirigota; village in municipal district of San Cristobal, province of Pinar del Rio.

Chirima, Surgidero; anchorage on coast of municipal district of Cobre, southern part of Santiago Province.

Chirino; barrio in municipal district of Matanzas, province of Matanzas. Population 702.

Chorillo, Sierra del; mountains in southern part of municipal district of Puerto Principe, province of Puerto Principe.

Chorrera Brava; town on Rio Zaza in municipal district of Sancti Spiritus, provvince of Santa Clara.

Chorrera Brava; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 83.

Chucho; barrio in municipal district of Mayari, province of Santiago. Population 494.

Ciego; village in municipal district of Macuriges, province of Matanzas.

Ciego; barrio in municipal district of Macuriges, province of Matanzas. Population 595.

Ciego, Punta; point on south coast of province of Pinar del Rio.

Ciego, Punta del; point on south coast of province of Santa Clara.

Ciego Abajo de la Rioja; town in western part of municipal district of Holguin, province of Santiago.

Ciego Alonso; village in municipal district of Camarones, province of Santa Clara.

Ciego Alonzo; barrio in municipal district of San Fernando, province of Santa Clara. Population 1,238.

Ciego de Avila; municipal district in province of Puerto Principe. Area 1,603 square miles. Population 9,801.

Ciego de Avila; an interior city of Puerto Principe. Population 2,919.

Ciego de Avila; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 3,892.

Ciego Montero; village in municipal district of Cartagena, province of Santa Clara.

Ciego Montero; barrio in municipal district of Cartagena, province of Santa Clara. Population 433.

Ciegos, Punta de los; point at entrance of Cabañas Bay, north coast of province of Pinar del Rio.

Cienega; barrio in municipal district of Bolondron, province of Matanzas.

Cienega, Arroyo; stream sinking in Cienega Zapata in southern part of province of Santa Clara.

Cienega, Boca de la; inlet on eastern coast of Isla de Pinos.

Cienega de Zapata; barrio in municipal district of Jaguey Grande, province of Matanzas. Population 16.

Cienega, Laguna; small lake in province of Puerto Principe, municipal district of Moron.

Cienfuegos; municipal district in province of Santa Clara. Area 2,119 square miles. Population 59,128.

Cienfuegos; city on south coast of province of Santa Clara. Population 30,038.

Cienfuegos, Bahia de; bay on south coast of municipal district of Cienfuegos, province of Santa Clara.

Cifuentes; municipal district in province of Santa Clara. Area 72 square miles. Population 3,825.

Cifuentes; an interior city of Santa Clara. Population 1,485.

Cifuentes; barrio in municipal district of Cifuentes, province of Santa Clara. Population 2,172.

Cimarones, Arroyo; small stream flowing to south coast of municipal district of Manzanillo, province of Santiago.

Cimarones, Punta; point on south coast of municipal district of Manzanillo, province of Santiago.

Cimarones Grandes, Ensenada and Rio; small river and harbor on south coast of province of Santiago.

Cimarrones, Arroyo; stream flowing to north coast in municipal district of Moron, province of Puerto Principe.

Cinco Leguas, Cayo de; island north of province of Matanzas.

Citerna, Rio de la; left-hand branch of Rio de las Nuevas, Isla de Pinos.

Claudio; village in southern part of province of Matanzas.

Claudio; barrio in municipal district of Macuriges, province of Matanzas. Population 1,390.

Coabillas; town in western part of municipal district of Puerto Principe, province of Puerto Principe.

Coabillas; barrio in municipal district of Roque, province of Matanzas. Population 1,434.

Cobarrubia, Punta; point on coast of municipal district of Puerto Padre, northern part of Santiago Province.

Cobas, Cayos; islands north of province of Santa Clara.

Cobre; municipal district in province of Santiago. Area 870 square miles. Population 10,707.

Cobre; barrio and interior city in municipal district of Cobre, in the province of Santiago, the site of abandoned copper mines. Population 1,028.

Cobre, Rio; river in municipal district of Cobre, province of Santiago.

Cobre, Punta del; point on north coast of Habana Province.

Coca, Arroyo; branch of Rio San Antonio, in Habana Province.

Cochinos, Bahia; bay on southern coast of province of Santa Clara.

Cochinos, Rio; river in central part of province of Matanzas.

Coco, Cayo; large island north of province of Puerto Principe.

Coco, Punta del; point on south coast of province of Pinar del Rio.

Cocodrilos, Caleta; cove on south coast of province of Santa Clara, in municipal district of Cienfuegos.

Cocodrilos, Punta de; point on south coast of Isla de Pinos.

Cocosoto; barrio in municipal district of Marianao, province of Habana. Population 2,602.

Cojimar; barrio in municipal district of Guanabacoa, province of Habana. Population 1,585.

Cojimar, Bahia de; bay on north coast of Habana Province.

Cojimar, Rio; river in Habana province flowing to north coast.

Cojimar, Rio; short river flowing to coast in southern part of municipal district of Cobre, province of Santiago.

Coliseo; village in municipal district of Guamacaro, province of Matanzas.

Coliseo; barrio in municipal district of Guamacaro, province of Matanzas. Population 620.

Colmenar; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

Coloma, Ensenada de la; bay on south coast of province of Pinar del Rio.

Coloma, Punta la; point at entrance of Ensenada de la Coloma, on south coast of province of Pinar del Rio.

Coloma, Rio la; river flowing into Ensenada de la Coloma, on south coast of Pinar del Rio.

Colon; municipal district in province of Matanzas. Area 114 square miles. Population 12,195.

Colon; an interior city of Matanzas. Population 7,175.

Colonias; town in southern part of province of Puerto Principe, municipal district of Ciego de Avila.

Colorada, Loma; hill in southern part of province of Santa Clara, municipal district of Trinidad.

Colorada, Loma; hill in municipal district of Gibara, province of Santiago.

Colorado, Arroyo; right-hand branch of Rio Grande in municipal district of Sagua de Tanamo, province of Santiago.

Colorado, Arroyo; small stream flowing to south coast in municipal district of Cobre, province of Santiago.

Colorado, Rio; short left-hand branch of Guayacanes, in municipal district of Moron, province of Puerto Principe.

Columbo, Punta del; point on north coast of Isla de Pinos.

Comadre, Sierra la; mountains in northern part of province of Pinar del Rio.

Comercio; barrio in municipal district of Jaruco, province of Habana.

Compostizo; barrio in municipal district of Aguacate, province of Habana.

Concepcion; barrio in municipal district of Palma Soriano, province of Santiago. Population 1,526.

Concepcion, Arroyo la; right-hand branch of Rio Samaraguacon, in province of Pinar del Rio.

Conchita; barrio in municipal district of Cabañas, province of Pinar del Rio.

Conchita; village near north coast, in municipal district of Cabañas, province of Pinar del Rio.

Concordia; barrio in municipal district of Madruga, province of Habana.

Condado; barrio in municipal district of Santa Clara, province of Santa Clara. Population 1,110.

Congo; town near west coast of province of Santiago, municipal district of Manzanillo.

Congo; barrio in municipal district of Manzanillo, province of Santiago. Population 796.

Congojas; barrio in municipal district of Rodas, province of Santa Clara. Population 2,171.

Consolacion del Norte; municipal district in province of Pinar del Rio. Area 203 square miles. Population 7,399.

Consolacion del Norte; village in municipal district of same name, province of Pinar del Rio.

Consolacion del Sur; municipal district in province of Pinar del Rio. Area 360 square miles. Population 16,665.

Consolacion del Sur; an interior city of Pinar del Rio. Population 3,062.

Consuegra, Arroyo; right-hand branch of Rio Samaraguacon, in province of Puerto Principe.

Contramaestre; village on river of same name, in province of Puerto Principe.

Contramaestre; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 2,368.

Contramaestre, Rio; important left-hand branch of Rio Cauto, in Santiago Province, dividing municipal districts of Cobre and Mayari from Jiguani for a distance of about 35 miles.

Contramaestre, Rio; left-hand branch of Rio Najasa in province of Puerto Principe.

Contreras; village in municipal district of Cardenas, northern part of province of Matanzas.

Contreras; barrio in municipal district of Mendez Capote, province of Matanzas. Population 921.

Conuco; barrio in municipal district of Caibarien, province of Santa Clara. Population 496.

Conuco, Cayo; island off north coast of province of Santa Clara and a barrio in municipal district of Caibarien.

Convento, Punta del; point on south coast of province of Pinar del Rio.

Convento Mulato; hills in municipal district of Manzanillo, province of Santiago.

Coravelo, Punta; point on north coast of province of Matanzas.

Corladeras, Arroyo; left-hand branch of Rio Yaleras, province of Santiago.

Corojal, Punta; point on south coast of province of Pinar del Rio.

Coronel Balcourt, Punta; point on south coast of province of Puerto Principe, municipal district of Santa Cruz del Sur.

Corral Falso; an interior city of Matanzas. Population 3,823.

Corrales, Arroyo; small branch of Arroyo Guayacanes, in municipal district of Moron, province of Puerto Principe.

Corrales, Arroyo; stream in northern part of province of Puerto Principe, uniting with Arroyo Junco to form Arroyo Robles.

Corrales, Loma; hills in western part of province of Puerto Principe, municipal district of Ciego de Avila.

Corralillo; village in southern part of municipal district of Guantanamo, province of Santiago.

Corralillo; village in Habana Province.

Corralillo; town near north coast in municipal district of Ceja de Pablo, province of Santa Clara.

Corralillo; barrio and village in municipal district of Bahai Honda, province of Pinar del Rio.

Corralillo; barrio in municipal district of Bauta, province of Habana.

Corralillo; barrio in municipal district of Ceja de Pablo, province of Santa Clara. Population 2,588.

Corralillo; barrio in municipal district of Guantanamo, province of Santiago. Population 552.

Corralillo, Rio; river in municipal district of Palma Soriano, province of Santiago.

Corralillo, Arroyo; short branch of Rio Caimiabo in southern part of province of Santa Clara.

Corralito; barrio in municipal district of Holguin, province of Santiago. Population 1,026.

Corral Nuevo; barrio in municipal district of Matanzas, province of Matanzas. Population 754.

Corral Nuevo, Laguna; small lake near north coast, in province of Matanzas.

Corras, Punta de las; point on Zapata Peninsula, southern coast of province of Santa Clara.

Corrientes, Cabo; cape on south coast of San Antonio Peninsula, province of Pinar del Rio.

Corrientes, Golfo de; gulf on south coast of San Antonio Peninsula, province of Pinar del Rio.

Cortaderas, Rio; river in province of Santiago, flowing into Bahia de Banes.

Cortes; barrio in municipal district of Guane, province of Pinar del Rio.

Cortes, Cayos; group of small islands off southern coast of province of Pinar del Rio.

Cortes, Laguna de; lagoon on south coast of province of Pinar del Rio.

Cortizo, Cayo; small island about 12 miles north of province of Puerto Principe.

Corua, Punta de la; point on south coast of province of Puerto Principe.

Coruas, Punta las; point on west coast of province of Pinar del Rio.

Coscorro, Lomas de; hills in municipal district of Puerto Principe, province of Puerto Principe.

Coscorrones, Puerto; port on north coast of province of Santa Clara.

Costilla; barrio in municipal district of Jaruco, province of Habana.

Cotilla; barrio in municipal district of San Jose de las Lajas, province of Habana.

Cotilla, Loma de; hill in Habana Province.

Cotorro; village in Habana Province.

Cozojal, Punta de; point on north coast of province of Matanzas.

Crimea; barrio in municipal district of Rancho Veloz, province of Santa Clara. Population 1,240.

Cristal, Arroyo; short branch of Rio Mayabon, in province of Matanzas.

Cristal, Sierra del; mountains in eastern part of municipal district of Mayari, province of Santiago.

Cristales, Arroyo; small stream in Habana Province.

Cristo (formed from Manzanillo); municipal district and city in province of Santiago. Population 1,194.

Cristo; barrio in municipal district of Bayamo, province of Santiago. Population 1,788.

Cristo; barrio in municipal district of Santiago de Cuba, province of Santiago. Population 5,310.

Cristo, Arroyo; left-hand branch of Rio Juan Lopez, province of Santa Clara.

Cristo, Cayo; islet north of province of Santa Clara.

Cristobal, Cayos de; group of small islands south of province of Santa Clara.

Cruces; municipal district in province of Santa Clara. Area 50 square miles. Population 7,953.

Cruces; an interior city of Santa Clara. Population 4,173.

Cruces, Arroyo; small coast stream in municipal district of Manzanillo, Santiago Province.

Cruces, Arroyo las; stream in eastern part of municipal district of Ciego de Avila, province of Puerto Principe.

Cruces, Punta de; point on north coast of Habana Province.

Cruz; barrio in municipal district of Guines, province of Habana.

Cruz, Cabo; cape at southwestern extremity of province of Santiago.

Cruz, Caleta de; cove on south coast of province of Santa Clara, in municipal district of Cienfuegos.

Cruz, Cayo; islet south of province of Puerto Principe.

Cruz, Cayo la; island north of province of Santa Clara.

Cruz, Cayo; island off coast of province of Puerto Principe, and north of Cayo Romano.

Cruz, Cerro del; mountain in northern part of province of Santiago.

Cruz de Bolanos; hills in municipal district of Alto Songo, province of Santiago.

Cuabas; barrio in municipal district of Holguin, province of Santiago. Population 1,223.

Cuajani; barrio in municipal district of Viñales, province of Pinar del Rio. Population 2,021.

Cuartel; barrio in municipal district of Jaruco, province of Habana.

Cuatro Caminos; village in Habana Province.

Cuatro Caminos; village in municipal district of Guantanamo, province of Santiago.

Cuatro Caminos; barrio in municipal district of Guantanamo, province of Santiago. Population 441.

Cubitas, Sierra de; mountains in northern part of municipal district of Puerto Principe, province of Puerto Principe.

Cueva, Cayo de la; islet off north coast of province of Santa Clara.

Cuevas, Punta and Rio; point and small river in south coast of province of Santiago, municipal district of Cobre.

Cuevitas; municipal district in province of Matanzas. Area 79 square miles. Population 5,807.

Cuevitas; an interior city of Matanzas. Population 2,634.

Cuevitas; barrio in municipal district of Cuevitas, province of Matanzas. Population 2,634.

Cuchilla, Alta; barrio in municipal district of Isla de Pinos, province of Habana.

Cuchilla, Arroyo; small stream in northern part of municipal district of Sagua de Tanamo, province of Santiago.

Cuchillas; hills in eastern part of municipal district of Baracoa, province of Santiago.

Cuchilles, Punta; point on west coast of municipal district of Niquero, province of Santiago.

Cuchilles, Rio; river flowing to west coast in municipal district of Niquero, province of Santiago.

Culebra, Rio; branch of Rio Nueva Mayabeque, in Habana Province.

Cumanayagua; village in municipal district of Cienfuegos, province of Santa Clara.

Cumanayagua; village in municipal district of Palmillas, province of Matanzas.

Cumanayagua; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 1,403.

Cumanayagua; barrio in municipal district of Palmillas, province of Matanzas. Population 969.

Cumbre; barrio in municipal district of Matanzas, province of Matanzas.

Cumbre, Loma de la; hill in municipal district of San Diego de los Baños, province of Pinar del Rio.

Cunucunu, Punta; point on north coast of province of Santa Clara.

Cupey, Loma del; hills in northern part of municipal district of Baracoa, province of Santiago.

Cupey, Rio; short stream in northern part of province of Santiago, municipal district of Baracoa.

Cupeyes; village in municipal district of Colon, province of Matanzas.

Cupeyes; barrio in municipal district of Moron, province of Puerto Principe. Population 633.

Curajaya, Arroyo; stream flowing to south coast in municipal district of Puerto Principe, province of Puerto Principe.

Curana; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,000.

Curazao, Punta de; point on south coast of Isla de Pinos.

Curiana, Payo; islet off north coast of municipal district of Puerto Principe, province of Puerto Principe.

Curiana, Punta; point on north coast of province of Puerto Principe.

Cuyaguateje, Rio; river in province of Pinar del Rio. Heads in hills in western part of province and flows south to coast. Length 40 miles.

Cuzco; village in municipal district of San Diego de Nuñez, province of Pinar del Rio.

Cuzco, Cala del; small bay on south coast of province of Santiago.

Cuzco, Loma del; hill in municipal district of Cabañas, northern part of province of Pinar del Rio.

Daguilla, Cerro de; hill in eastern part of Isla de Pinos.

Daiquiri; city on southern coast of Santiago Province. Population 1,380.

Daiquiri; barrio in municipal district of Caney, province of Santiago. Population 1,380.

Dajao; village in southern part of province of Santiago, near city of Santiago.

Dajao; barrio in municipal district of Santiago de Cuba, province of Santiago. Population 1,555.

Damian; village in municipal district of Holguin, province of Santiago.

Damuji, Rio; river in province of Santa Clara, flowing into Cienfuegos Bay. Length 35 miles.

Datil; town in municipal district of Bayamo, province of Santiago.

Datil; barrio in municipal district of Bayamo, province of Santiago. Population 2,142.

Dayamiguas, Ensenada; small bay on south coast of province of Pinar del Rio.

Delgado, Lomas de; hills in Habana Province.

Delicias; barrio in municipal district of Cabañas, province of Pinar del Rio.

Demajayabo; village in municipal district of Santiago de Cuba, province of Santiago.

Demajayabo; barrio in municipal district of Caney, province of Santiago. Population 1,752.

Demajagabo, Ensenada; small bay on south coast of municipal district of Santiago de Cuba, Santiago Province.

Derramados, Arroyo; left-hand branch of Rio Hanabana, in province of Santa Clara.

Deseada, Loma la; hill in eastern part of municipal district of Puerto Principe, province of Puerto Principe.

Diablo, Caleta del; cove on south coast of Isla de Pinos.

Diablo, Punta; point on north coast of province of Santiago.

Diago, Montes de; hills in Habana Province.

Diamante, Caleton del; cove on east coast of province of Santiago.

Diamante, Punta; point at entrance of Cabañas Bay, north coast of province of Pinar del Rio.

Diana, Cayo; small island off north coast of province of Matanzas.

Diego, Cayo; island west of province of Pinar del Rio.

Diego Perez, Cayo de; island south of province of Santa Clara.

Dios, Cayos de; islands near Isla de Pinos.

Dolores; village in municipal district of Artemisa, province of Pinar del Rio.

Dolores; barrio in municipal district of Artemisa, province of Pinar del Rio. Population 1,692.

Dolores; barrio in municipal district of Santiago de Cuba, province of Santiago. Population 9,011.

Dolores, Punta Da.; point on north coast of province of Santiago.

Domingo; barrio in municipal district of Managua, province of Habana.

Domingo Alonso, Lomas; hills in western part of province of Matanzas.

Dominguez; town in southern part of province of Puerto Principe, municipal district of Ciego de Avila.

Dominica, Punta; point on north coast of province of Pinar del Rio.

Doña Maria; barrio in municipal district of Santiago de las Vegas, province of Habana.

Doncella, Arroyo la; short branch of Rio Contramaestra, in municipal district of Jiguani, province of Santiago.

Dorados; barrio in municipal district of Palma Soriano, province of Santiago. Population 691.

Dormitorio, Arroyo; stream in eastern part of municipal district of Ciego de Avila, province of Puerto Principe.

Dos Bocas; village in municipal district of Santiago de Cuba, province of Santiago.

Dos Bocas; barrio in municipal district of Caney, province of Santiago. Population 1,217.

Dos Caminos; barrio in municipal district of San Luis, province of Santiago. Population 3,991.

Dos Cuartonis; barrio in municipal district of Manzanillo, province of Santiago. Population 643.

Dos Palmas; village in municipal district of Cobre, province of Santiago.

Dos Palmas; barrio in municipal district of Cobre, province of Santiago. Population 1,226.

Doucella, Loma de la; hills in municipal district of Guantanamo, province of Santiago.

Duaba; village in municipal district of Baracoa, near city of Baracoa, province of Santiago.

Duaba; barrio in municipal district of Baracoa, province of Santiago. Population 1,186.

Duaba, Rio; river in municipal district of Baracoa, province of Santiago, flowing to north coast. Length 18 miles.

Duran, Rio; river flowing to coast in southwestern part of municipal district of Puerto Principe, province of Puerto Principe. Length 35 miles.

Ebano, Punta del; point on north coast of Cayo Sabinal, province of Puerto Principe.

Ecuador; town in southern part of municipal district of Puerto Principe, province of Puerto Principe.

Ecuador; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 2,215.

Egidos; barrio in municipal district of Camajuani, province of Santa Clara. Population 700.

Egidos; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 634.

Egidos; barrio in municipal district of Santa Clara, province of Santa Clara. Population 1,987.

El Calvario; village in Habana Province.

El Cerro; village in Habana Province, suburb of Habana.

El Gabriel; village in Habana Province.

El Gato, Rio; branch of Rio Culebra, in Habana Province.

El Gauey; village in municipal district of Santiago de Cuba, province of Santiago.

El Horno; village in municipal district of Bayamo, Santiago Province.

El Jibaro, Arroyo; small branch of Rio Almendares in Habana Province.

El Jobo; village in municipal district of Guanajay, province of Pinar del Rio.

El Masio, Laguna; small lake in municipal district of Macuriges, province of Matanzas.

El Rayo; village in municipal district of Guanajay, northern part of province of Pinar del Rio.

El Santo; village near coast in municipal district of Calabazar, province of Santa Clara.

El Varadero; village on north coast of province of Matanzas.

Encrucijada; city in Santa Clara. Population 1,725.

Encrucijada; village in municipal district of Calabazar, northern part of province of Santa Clara.

Encrucijada; barrio in municipal district of Calabazar, province of Santa Clara. Population 2,689.

Entresaco, Peninsula de; peninsula on north coast of Santiago between Bahia de Nipe and Bahia de Lebisa.

Ermitano; barrio in municipal district of Cobre, province of Santiago. Population 240.

Escalera; barrio in municipal district of Jaruco, province of Habana.

Escalera, Montes de la; hills in Habana Province.

Escalereta, Punta; point on south coast of municipal district of Niquero, Santiago Province.

Escarza; barrio in municipal district of San Fernando, province of Santa Clara.

Escondido; village in eastern part of municipal district of Baracoa, province of Santiago.

Escondido, Puerto; port on south coast of province of Santiago.

Escondido, Punta; point on north coast of province of Matanzas.

Esparto, Loma del; hills in eastern part of province of Santiago.

Esperanza; municipal district in province of Santa Clara. Area 159 square miles. Population 7,811.

Esperanza; an interior city of Santa Clara. Population 2,177.

Esperanza; barrio in municipal district of Manzanillo, province of Santiago. Population 1,726.

Esquina de Teja; village in municipal district of Cardenas, northern part of province of Matanzas.

Estabones, Cayos los; small islands west of province of Pinar del Rio.

Estaca, Punta de la; point on northeastern coast of province of Santiago.

Estante; village in municipal district of Alacranes, western part of province of Matanzas.

Estante; barrio in municipal district of Alacranes, province of Matanzas. Population 2,823.

Este; barrio in municipal district of Alacranes, province of Matanzas. Population 716.

Este, Punta del; point on east coast of Isla de Pinos.

Esteron; barrio in municipal district of Sagua de Tanamo, province of Santiago. Population 545.

Estrella, Alto de la; hills in municipal district of Mayari, province of Santiago.

Estropajos, Arroyo; small branch of Rio Samaraguacon, in province of Puerto Principe.

Fabrica, Cayos de la; groups of small islands south of province of Santa Clara.

Fajonal, Punta; point on north coast of Habana Province.

Falcones, Cayos de los; group of islands north of province of Santa Clara.

Falso, Cabo; cape on south coast of San Antonio peninsula, province of Pinar del Rio.

Farallon, Caleta; cove on south coast of province of Santa Clara, in municipal district of Cienfuegos.

Farallones, Lomas de; hills in southern part of province of Santiago.

Farfan, Arroyo; small branch of Arroyo Guayacanes, in municipal district of Moron, province of Puerto Principe.

Feo, Rio; small right-hand branch of Rio Sequia, western part of province of Pinar del Rio.

File, Arroyo; small left-hand branch of Rio Contramaestra, in municipal district of Jiguani, province of Santiago.

Fisga, Punta de; point on south coast of province of Pinar del Rio.

Flacos, Laguna; small lake on San Antonio peninsula, western part of province of Pinar del Rio.

Flamenco, Cayo; islet south of province of Santa Clara.

Flamencos, Arroyo; small stream flowing to south coast, in province of Pinar del Rio.

Flamencos, Punta; point on south coast of Habana Province.

Flores, Loma las; hill in municipal district of Pinar del Rio, province of Pinar del Rio.

Florida Blanca; barrio in municipal district of Alto Songo, province of Santiago. Population 1,081.

Fomento; village in municipal district of Trinidad, province of Santa Clara.

Fomento; barrio in municipal district of Trinidad, province of Santa Clara. Population 1,769.

Fragatas, Punta; point on north coast of province of Pinar del Rio.

Fragoso, Cayo; large island north of province of Santa Clara.

Fraile, Punta del; point on north coast of province of Santiago.

Fraile, Punta del; point on south coast of San Antonio peninsula, province of Pinar del Rio.

Frailecito, Punta del; point on north coast of province of Santiago.

Frances, Cabo; cape on south coast of province of Pinar del Rio.

Frances, Cabo; cape on west coast of Isla de Pinos.

Frances, Punta; point on Peninsula de Hicacos, north coast of province of Matanzas.

Francisco; village in municipal district of Guane, province of Pinar del Rio.

Fray Benito; village in municipal district of Gibara, province of Santiago.

Fray Benito; barrio in municipal district of Gibara, province of Santiago. Population 2,663.

Frias; barrio in municipal district of Candelaria, province of Pinar del Rio.

Frijol, Sierra del; mountains in municipal district of Baracoa, province of Santiago.

Frio, Rio; right-hand branch of Rio Cuyaguateje, in western part of province of Pinar del Rio.

Fuera, Punta de; point on north coast of Isla de Pinos.

Fuga, Cayo; islet south of province of Santa Clara.

Funche, Arroyo del; stream flowing to north coast in San Antonio peninsula, province of Pinar del Rio.

Fundicion; barrio in municipal district of Cardenas, province of Matanzas.

Gabriel; village in municipal district of San Diego de Nuñez, province of Pinar del Rio.

Gabriel; barrio in municipal district of Guira de Melena, province of Habana. Population 764.

Gabriel; barrio in municipal district of San Nicolas, province of Habana.

Galafre; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio.

Galeon; barrio in municipal district of Bolondron, province of Matanzas.

Galeoncita; barrio in municipal district of Alacranes, province of Matanzas. Poplation 474.

Galindo, Cayos; islands north of province of Matanzas.

Gallardo; barrio in municipal district of Jaguey Grande, province of Matanzas. Population 750.

Gallego, Alto de la; hill in Habana Province.

Galofre, Rio; short river flowing to south coast in western part of Pinar del Rio.

Gamado, Punta del; point on coast of municipal district of Nuevitas, province of Puerto Principe.

Gamboa, Arroyo; short stream flowing to north coast in municipal district of Sagua de Tanamo, Santiago Province.

Gansi, Punta; point on north coast of province of Santa Clara.

Ganuza; barrio in municipal district of San Jose de las Lajas, province of Habana.

Garcia, Arroyo; small branch of Rio Jabacoa, in southern part of province of Santa Clara.

Garnacha, Ensenada; bay on west coast of province of Pinar del Rio.

Garrido; village in municipal district of Cabañas, province of Pinar del Rio.

Garrido, Pico; peak in municipal district of Pinar del Rio, province of Pinar del Rio.

Garzo; barrio in municipal district of Jaruco, province of Habana.

Gato, Montes del; hills in Habana province.

Gato, Punta de; point on south coast of province of Pinar del Rio.

Gato, Punta del; point on south coast of municipal district of Manzanillo, province of Santiago.

Gavilan; barrio in municipal district of Cienfuegos, province of Santa Clara.

Gavilan, Punta; point on south coast of province of Santa Clara.

Gavilan, Rio; river flowing to south coast in municipal district of Cienfuegos, province of Santa Clara.

Gavilana, Lomas de la; hills in Habana Province.

Gavilancito; barrio in municipal district of Cienfuegos, province of Santa Clara.

Gazuela, Arroyo; stream flowing to south coast in province of Puerto Principe.

Geladas, Sierra de las; mountains in municipal district of Pinar del Rio.

Geronimo, Punta; point on west coast of province of Pinar del Rio.

Gibara; municipal district in province of Santiago. Area 466 square miles. Population 31,594.

Gibara; city on north coast of Santiago. Population 6,841.

Gibara, la Silla de; hills in northern part of municipal district of Gibara, province of Santiago.

Giquima, Alto de la; hill in Habana Province.

Gitano, Cayo; islet southwest of province of Puerto Principe.

Gloria, Loma de la; hill in Habana Province.

Gloria, Loma la; hill in municipal district of Trinidad, southern part of province of Santa Clara.

Glorietta; barrio in municipal district of Guantanamo, province of Santiago. Population 2,052.

Gobernadora, Punta; point on north coast of province of Pinar del Rio.

Gobierno; barrio in municipal district of Guantanamo, province of Santiago. Population 1,219.

Gonzalo; barrio in municipal district of Bolondron, province of Matanzas.

Gorda, Punta; point on north coast of province of Santiago, municipal district of Gibara.

Gorda, Punta; point on north coast of province of Puerto Principe.

Gorda, Punta; point on Zapata Peninsula, south coast of province of Santa Clara.

Gorda, Punta; point on north coast of province of Pinar del Rio.

Gorda, Punta; point on north coast of municipal district of Baracoa, province of Santiago.

Gorda, Punta; point on south coast of province of Santa Clara.

Gorda, Punta; point on north coast of province of Santa Clara, in municipal district of Quemado de Guines.

Gorda, Punta; point on north coast of province of Santa Clara, municipal district of Las Vueltas.

Gordas, Arroyo de las; small stream flowing to west coast, in province of Pinar del Rio.

Gordas, Arroyo las; left-hand branch of Rio Tana, in province of Puerto Principe.

Gordas, Cayo Julias; island north of province of Santa Clara.

Govea; barrio in municipal district of San Antonio de los Baños, province of Habana. Population 671.

Gral Concha, Cayo; island north of province of Santa Clara.

Gral Laborde, Cayo; island north of province of Santa Clara.

Gral Rubalcava, Punta; point on north coast of province of Matanzas.

Gral Vives, Cayo; island north of province of Matanzas.

Gramal, Rio; river in province of Puerto Principe, flowing to north coast. Length 30 miles.

Gramales, Sierra de; mountains in western part of province of Pinar del Rio.

Granadillas; village near north coast, in municipal district of San Diego de Nuñez, province of Pinar del Rio.

Grande, Arroyo; left-hand branch of Rio Zaza, province of Santa Clara, municipal district of Sancti Spiritus.

Grande, Arroyo; small stream, sinking in marsh, in southern part of Isla de Pinos.

Grande, Caleta; small bay on west coast of Isla de Pinos.

Grande, Laguna; lake in municipal district of Santa Cruz del Sur, southern part of province of Puerto Principe.

Grande, Laguna; small lake near north coast of municipal district of Puerto Principe, province of Puerto Principe.

Grande, Punta; point on north coast of Santiago province, municipal district of Gibara.

Grande, Rio; river in northwestern part of municipal district of Sagua de Tanamo, province of Santiago, flowing to coast.

Grande, Rio; river in province of Puerto Principe. Heads in Loma Arroyo Blanco and flows south to coast. Length 30 miles.

Gran Diabola, Punta; point on south coast of province of Santa Clara.

Grantierra; barrio in municipal district of Baracoa, province of Santiago. Population 632.

Grifa; village near south coast, in municipal district of Guane, province of Pinar del Rio.

Grifa, Ensenada de la; small bay on south coast of province of Pinar del Rio.

Grillo; barrio in municipal district of Santa Maria del Rosario, province of Habana.

Grillo, Loma del; hill in Habana Province.

Grulla, Punta de la; point on south coast of province of Puerto Principe, municipal district of Moron.

Guacamayas, Rio; river flowing to north coast, in western part of province of Pinar del Rio.

Guacamayas, Sierra; mountains in municipal district of Consolacion del Norte, province of Pinar del Rio.

Guadalupe; town in the hilly region of municipal district of Moron, western part of province of Puerto Principe.

Guadalupe; village in municipal district of Camajuani, province of Santa Clara.

Guadalupe; barrio in municipal district of Camajuani, province of Santa Clara. Population 2,569.

Guadalupe; barrio in municipal district of Moron, province of Puerto Principe. Population 1,554.

Guadina, Ensenada and Puerto; bay and harbor on west coast of province of Pinar del Rio.

Guadina, Punta de; point at entrance of Guadina Harbor, west coast of province of Pinar del Rio.

Guagenes, Rio; head stream of Rio Mayabeque, in Habana Province.

Guagui, Rio; small left-hand branch of Yumuri River, in Santiago Province.

Guaicanamar; barrio in municipal district of Jaruco, province of Habana.

Guaicanamar; barrio in municipal district of Santa Cruz del Sur, province of Puerto Principe. Population 598.

Guaicanamar, Arroyo; left-hand branch of Rio Najasa, in province of Puerto Principe.

Guaicanamar, Canada; stream flowing to south coast in province of Puerto Principe.

Guaicanamar, Sierra de; mountains in southern part of municipal district of Puerto Principe, province of Puerto Principe.

Guaimaro; town in eastern part of municipal district of Puerto Principe, province of Puerto Principe.

Guaimaro; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 2,940.

Guaiquiba; village in southern part of province of Pinar del Rio, municipal district of San Cristobal.

Guajaba, Isla de; island north of municipal district of Puerto Principe, province of Puerto Principe.

Guajabana; village near north coast of province of Santa Clara, in municipal district of Caibarien.

Guajabana; barrio in municipal district of Caibarien, province of Santa Clara. Population 478.

Guajaco, Arroyo; small stream in municipal district of Puerto Padre, Santiago Province.

Guajay; village in Habana Province.

Guajaybon; barrio in municipal district of Mariel, province of Pinar del Rio.

Guajaybon, Pan de; highest summit of Organ Mountains in Pinar del Rio. Height 2,500 feet.

Guajimico, Arroyo; creek flowing to south coast in municipal district of Cienfuegos, province of Santa Clara.

Guajiro; barrio and village in municipal district of Julian Diaz, province of Pinar del Rio.

Guama, Rio; river flowing to coast in municipal district of Santiago de Cuba, province of Santiago.

Guama, Rio; right-hand branch of Rio Bayamo, in municipal district of Bayamo, province of Santiago.

Guamacaro; municipal district in province of Matanzas. Area 159 square miles. Population 6,000.

Guamacaro; village in municipal district of Guamacaro, province of Matanzas.

Guamacaro; barrio in municipal district of Guamacaro, province of Matanzas. Population 552.

Guamajales; barrio in municipal district of Roque, province of Matanzas. Population 499.

Guamatas; village in municipal district of Marti, province of Matanzas.

Guamo; town on Rio Cauto, in municipal district of Bayamo, province of Santiago.

Guamo; barrio in municipal district of Bayamo, province of Santiago. Population 769.

Guamutas; barrio in municipal district of Marti, province of Matanzas. Population 2,505.

Guanabacoa; municipal district in province of Habana. Area 85 square miles. Population 20,080.

Guanabacoa; city near Habana, on north coast of Habana Province. Population 13,965.

Guanabana; village in municipal district of Matanzas, province of Matanzas.

Guanabana; barrio in municipal district of Matanzas, province of Matanzas. Population 1,005.

Guanabana, Arroyo; stream in western part of municipal district of Puerto Padre, Santiago Province.

Guanabito, Lomas del; hills in Habana Province.

Guanabo; village in Habana Province.

Guanabo; barrio in municipal district of Batabano, province of Habana. Population 436.

Guanabo; barrio in municipal district of Jaruco, province of Habana. Population 908.

Guanabo, Arroyo; short left-hand branch of Rio Jatibonico, in municipal district of Moron, province of Puerto Principe.

Guanabo, Cayo de; small island off north coast of province of Santa Clara.

Guanabo, Punta de; point on north coast of Habana Province.

Guanabo, Rio; river in Habana Province, flowing to north coast.

Guanagayabo, Laguna; lake near north coast in province of Matanzas.

Guanaja; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 848.

Guanajales; village in municipal district of Roque, province of Matanzas.

Guanajara, Rio; river flowing to south coast in province of Santa Clara, municipal district of Trinidad. Length 30 miles.

Guanajay; municipal district in province of Pinar del Rio. Area 12 square miles. Population 8,796.

Guanajay; an interior city of Pinar del Rio. Population 6,483.

Guanajo; barrio in municipal district of Guines, province of Habana.

Guanal, Punta del; point on north coast of San Antonio Peninsula, province of Pinar del Rio.

Guanal, Punta; point on east coast of province of Santiago.

Guanal, Punta de; point on north coast of province of Santiago.

Guanales; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 508.

Guanayara, Rio; river flowing to south coast in municipal district of Trinidad, province of Santa Clara.

Guanayu, Arroyo; right-hand branch of Rio Tana, province of Santiago.

Guandao; barrio in municipal district of Baracoa, province of Santiago. Population 1,536.

Guandas; village in eastern part of municipal district of Baracoa, province of Santiago.

Guane; municipal district in province of Pinar del Rio. Area 1,155 square miles. Population 14,760.

Guane; village in municipal district of Guane, province of Pinar del Rio.

Guane; barrio in municipal district of Guane, province of Pinar del Rio. Population 1,038.

Guane, Cerro de; hill in municipal district of same name in province of Pinar del Rio.

Guanes, Punta; point on north coast of province of Pinar del Rio.

Guanes, Punta de; point on north coast of province of Matanzas.

Guanes, Puerto de; cove on north coast of Habana Province.

Guaney, Punta; point on north coast of province of Pinar del Rio.

Guanijibe; village in municipal district of San Juan de los Remedios in northern part of province of Santa Clara.

Guanijibes; barrio in municipal district of San Juan de los Remedios, province of Santa Clara. Population 1,047.

Guanillas; barrio in municipal district of Rancho Veloz, province of Santa Clara. Population 936.

Guanimar, barrio in municipal district of Alquizar, province of Habana. Population 485.

Guaninicun, Rio; left-hand branch of Rio Majagebo, province of Santiago.

Guaninicun; village in southern part of municipal district of Alto Songo, province of Santiago.

Guaninicun; barrio in municipal district of Caney, province of Santiago. Population 1,247.

Guaniquical; barrio in municipal district of Trinidad, province of Santa Clara. Population 985.

Guaniquical, Lomas; hills in municipal district of Trinidad, southern part of province of Santa Clara.

Guanito, Punta del; point on south coast of province of Pinar del Rio.

Guano, Laguna; small lake in northern part of municipal district of Ciego de Avila, province of Puerto Principe.

Guanos, Punta de; point on southeast coast of province of Santiago.

Guantanamo; municipal district in province of Santiago. Area 1,216 square miles. Population 28,063.

Guantanamo; a coast city of Santiago. Population 7,137.

Guantanamo, Rio; river in southern part of province of Santiago. Heads in Santa Maria Mountains in municipal district of Alto Songo, and flows southeastward into Guantanamo Bay. Length 42 miles.

Guara; municipal district in province of Habana. Area 29 square miles. Population 1,835.

Guara; village in Habana Province.

Guara, Rio; branch of Rio San Antonio in Habana Province.

Guara, Rio la; small stream in western part of province of Matanzas.

Guaracabulla; village in municipal district of Placetas, province of Santa Clara.

Guaracabulla; barrio in municipal district of Placetas, province of Santa Clara. Population 1,194.

Guaracabun, Rio; right-hand branch of Rio Manati, province of Santa Clara.

Guarana, Arroyo del Brazo; right-hand branch of Rio Sevilla in province of Puerto Principe.

Guarda Boca, Punta; point on north coast of province of Santiago, municipal district of Gibara.

Guareiras; village in municipal district of Palmillas, province of Matanzas.

Guareiras; barrio in municipal district of Palmillas, province of Matanzas. Population 793.

Guareiras, Rio; left-hand branch of Rio Negro, in southern part of province of Matanzas.

Guarito, Punta de; point on north coast of municipal district of Baracoa, province of Santiago.

Guaro, Rio; river rising in northern part of municipal district of Guantanamo, province of Santiago, and flowing south into Guantanamo Bay. Length 17 miles.

Guaro, Rio; right-hand branch of Nipe River, in northern part of municipal district of Mayari, province of Santiago.

Guasasas, Caleta; small bay on south coast of province of Santa Clara in municipal district of Cienfuegos.

Guasas, Brazo de; left-hand branch of Rio Negro in southern part of province of Matanzas.

Guasimal; village on river of same name in southern part of province of Santa Clara.

Guasimal; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 1,500.

Guasimal, Arroyo de; small branch of Arroyo Yagua in province of Santa Clara.

Guasimas; barrio and village in municipal district of Cardenas, province of Matanzas.

Guasimas, Laguna de las; lake in southeastern part of province of Puerto Principe, near coast.

Guasimas, Loma las; hill in municipal district of San Juan y Martinez, province of Pinar del Rio.

Guaso; village in municipal district of Guantanamo, province of Santiago.

Guaso; barrio in municipal district of Guantanamo, province of Santiago. Population 1,514.

Guata; village in municipal district of Sagua la Grande, province of Santa Clara.

Guatao; barrio and village in municipal district of Bauta, province of Habana.

Guayabal; municipal district in province of Pinar del Rio. Area 37 square miles. Population 2,710.

Guayabal; town on south coast of province of Puerto Principe.

Guayabal; barrio in municipal district of Guayabal, province of Pinar del Rio.

Guayabal; barrio in municipal district of Santa Cruz del Sur, province of Puerto Principe. Population 937.

Guayabal, Punta; point on north coast of province of Pinar del Rio.

Guayabal, Punta del; point on south coast of municipal district of Santa Cruz del Sur, province of Puerto Principe.

Guayabal, Rio; right-hand branch of Rio Toa in Santiago Province.

Guayabano, Rio de; right-hand branch of Rio Sabana la Mar, in municipal district of Guantanamo, province of Santiago. Length 15 miles.

Guayabo; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Guayabo; barrio in municipal district of Mantua, province of Pinar del Rio.

Guayabo; barrio in municipal district of Mayari, province of Santiago. Population 1,393.

Guayabo; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 1,894.

Guayabo, Arroyo; stream flowing to south coast in province of Puerto Principe.

Guayabo, Rio; river flowing to eastern coast on Isla de Pinos.

Guayabo Largo; village in municipal district of Roque, southern part of province of Matanzas.

Guayabon; village in municipal district of Guanajay, northern part of province of Pinar del Rio.

Guayabon, Punta; point on north coast of province of Pinar del Rio.

Guayacabo, Rio; river near west coast in municipal district of Bayamo, Santiago Province.

Guayacanes, Arroyo; stream flowing to south coast in municipal district of Ciego de Avila, province of Puerto Principe. Known as Arroyo los Negros near its mouth. Length 30 miles.

Guayacanes, Punta; point on south coast of province of Santiago.

Guayacanes, Punta; point on north coast of Habana Province.

Guayo; village in municipal district of San Juan de las Yeras, province of Santa Clara.

Guayo; barrio in municipal district of San Juan de las Yeras, province of Santa Clara. Population 927.

Guayos; village in municipal district of Sancti Spiritus, province of Santa Clara.

Guayos; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 1,430.

Guces, Rio; left-hand branch of Rio Juan Lopez, western part of province of Santa Clara.

Guiabasan, Rio; left-hand branch of Rio Tajacon, in Santiago Province.

Guillen; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio.

Guinia de Miranda; village in municipal district of Trinidad, province of Santa Clara.

Guinia de Miranda; barrio in municipal district of Trinidad, province of Santa Clara. Population 1,056.

Guincho, Punta del; point on north coast of province of Puerto Principe.

Guines; municipal district in province of Habana. Area 38 square miles. Population 11,394.

Guines; an interior city of Habana Province. Population 8,149.

Guines; village in municipal district of Quemado de Guines, province of Santa Clara.

Guines; barrio in municipal district of Quemado de Guines, province of Santa Clara. Population 1,174.

Guiniao; village in northeastern part of municipal district of Baracoa, province of Santiago.

Guiniao; barrio in municipal district of Baracoa, province of Santiago. Population 1,686.

Guira; city in province of Matanzas. Population 1,676.

Guira; village in municipal district of Holguin, Santiago Province.

Guira, Loma de la; hills in municipal district of Cobre, province of Santiago.

Guira, Rio la; short left-hand branch of Rio Contramaestra, Santiago Province.

Guira, Sierra de; mountains in municipal district of San Diego de los Baños, province of Pinar del Rio.

Guira de Melena; municipal district in province of Habana. Area 63 square miles. Population 11,548.

Guiros, Rio los; river flowing to south coast in province of Puerto Principe. Length 25 miles.

Guisa; village in municipal district of Bayamo, province of Santiago.

Guisa; barrio in municipal district of Bayamo, province of Santiago. Population 3,565.

Guizasos, Punta de; point on south coast of Zapata Peninsula, south coast of province of Santa Clara.

Guma, Ensenada del; small bay on south coast of municipal district of Niquero, province of Santiago.

Gurajaya, Cayos de; islets off south coast of municipal district of Santa Cruz del Sur, province of Puerto Principe.

Habana; the smallest and most densely populated of the provinces of Cuba. It lies in the western part of the island, extending across from north to south, and includes Isla de Pinos, lying south of Cuba, which is connected with this province as a municipal district. The area, including Isla de Pinos (840 square miles), is 2,772 square miles. The surface is rolling, without decided relief.

The population in 1899 was 424,804, showing an average density of population of 153 per square mile. Owing to the presence of the city of Habana, as well as other large towns, the urban population comprised not less than 65 per cent of the total number of inhabitants. Males were in excess of females to the extent of 5 per cent. The native whites constituted 58 per cent of the total population, colored 26 per cent, and foreign whites 16 per cent, the greater part of the foreign born being found in the city of Habana. This is the only province the majority of whose inhabitants are able to read, the proportion of literates being 53 per cent. The province is divided into 36 municipal districts and contains a number of large cities, among them Habana, Guanabacoa, Guines, Marianao, Melena, Regla, and San Antonio de los Baños.

Habana; the capital and chief city of Cuba. It is situated upon the western shore of Habana harbor, one of those curious pouch-shaped harbors so common upon the Cuban coast. The population in 1899 was 235,981, making it by far the largest city of the island. Of the population males are in excess to the extent of 5 per cent. As to race and nativity, 49 per cent, or a trifle less than one-half, are native whites. The proportion of foreign born was no less than 22 per cent, while that of colored was 28 per cent. The foreign born were composed in a large proportion of persons of Spanish blood. The water supply of Habana is derived from the springs of Vento, 9 miles distant, the water being brought to the city by aqueduct.

Habana; municipal district in province of Habana. Area 57 square miles. Population 242,055.

Hacha, Rio del; left-hand branch of Rio Zaza, in municipal district of Placetas, province of Santa Clara.

Hachuela, Cayo; island north of province of Santa Clara.

Hanabana, Rio; river rising in northwestern part of province of Santa Clara and flowing between provinces of Santa Clara and Matanzas, into Laguna del Tesoro. Length 38 miles.

Hanabanilla, Rio; left-hand branch of Rio Arimao, in southern part of province of Santa Clara.

Hatibonico, Surgidero; anchorage on south coast of municipal district of Guantanamo, province of Santiago.

Hatiguanico, Rio; outlet of Laguna del Tesoro, dividing provinces of Matanzas and Santa Clara for a distance of 45 miles, and flowing into Ensenada de la Broa on south coast.

Hatillo; village in municipal district of San Diego del Valle, province of Santa Clara.

Hatillo; barrio in municipal district of San Diego del Valle, province of Santa Clara. Population 461.

Hato Nuevo; village in municipal district of Marti, province of Matanzas.

Hato Nuevo de Santa Clara; hills in northern part of province of Matanzas.

Hato Quemado; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

Hayagan, Arroyo; small left-hand branch of Rio Sagua la Chica, in municipal district of Santa Clara, province of Santa Clara.

Helcohal, Lomas; hills in southern part of province of Santa Clara.

Helechal, Loma; hill in municipal district of Guantanamo, province of Santiago.

Hembra, Punta de la; point on eastern coast of province of Santiago.

Hermitano; village in municipal district of Cobre, province of Santiago.

Hernando; barrio in municipal district of Placetas, province of Santa Clara.

Herradura; village in municipal district of San Diego de los Baños, province of Pinar del Rio.

Herradura; barrio in municipal district of Julian Diaz, province of Pinar del Rio.

Herradura, Ensenada; cove on north coast of municipal district of Holguin, Santiago province.

Herradura, Laguna la; lake in municipal district of Guane, southern part of province of Pinar del Rio.

Herradura, Punta; point on north coast of Santiago Province, municipal district of Holguin.

Herradura, Rio; river flowing to south coast in province of Pinar del Rio. Length 26 miles.

Herreso, Loma del; hills in Habana Province.

Hicacos, Arroyo de; small right-hand branch of Rio de Baja, in western part of province of Pinar del Rio.

Hicacos, Cabo; cape at extremity of peninsula of same name, northern part of province of Matanzas.

Hicacos, Peninsula de; on the north coast of province of Matanzas.

Hicacos, Punta; point on north coast of Santiago Province, municipal district of Gibara.

Hicacos, Punta; point on north coast of Habana Province.

Hierro, Lomas; hills in municipal district of Puerto Principe, province of Puerto Principe.

Hierro, Punta de; point on south coast of province of Santiago, municipal district of Manzanillo.

Higuanojo, Rio; river in province of Santa Clara. Heads in Lomas de Banao and flows south to coast. Length 18 miles.

Holandes, Punta del; point on south coast of San Antonio peninsula, province of Pinar del Rio.

Holguin; municipal district in province of Santiago. Area 1,589 square miles. Population 34,506.

Holguin; an interior city of Santiago. Population 6,045.

Holguin, Rio; right-hand branch of Rio Salado, in municipal district of Holguin, province of Santiago. Length 22 miles.

Hondito, Punta del; point on north coast of province of Santiago.

Hondo, Arroyo; small stream near west coast of municipal district of Manzanillo, Santiago Province.

Hondo, Rio; river in province of Pinar del Rio. Heads in hills of municipal district of San Diego de Nuñez and flows southeastward to coast. Length 24 miles.

Hondo, Rio; river in Pinar del Rio. Heads in Sierra de los Organos and flows southeastward to coast. Length 38 miles.

Hondo, Rio; tributary to Quivican River in Habana Province.

Hondo, Rio; right-hand branch of Rio Higuanojo, in southern part of province of Santa Clara.

Hondon, Punta del; point on west coast of province of Santiago, municipal district of Manzanillo.

Hongolosongo; village in municipal district of Cobre, province of Santiago.

Hongolosongo; barrio in municipal district of Cobre, province of Santiago. Population 1,987.

Horcones; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Horcones; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio. Population 1,608.

Hormigas, Cayo; islet south of province of Puerto Principe.

Hormiguero, Arroyo; left branch of Cayajo River in western part of Santiago Province.

Horno; barrio in municipal district of Bayamo, province of Santiago. Population 1,298.

Hospital; barrio in municipal district of Guantanamo, province of Santiago. Population 1,594.

Hoyo Colorado; village in Habana province.

Hoyo Colorado; barrio in municipal district of Bauta, province of Habana. Population 1,046.

Hoyos; barrio in municipal district of Baracoa, province of Santiago. Population 729.

Iglesia; an interior city of Matanzas. Population 3,441.

Iguara; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 419.

Iguana, Punta; point on south coast of province of Puerto Principe.

Iguanabana, Rio; right-hand branch of Rio Guantanamo, in municipal district of Guantanamo, Santiago province. Length 15 miles.

Imias; barrio in municipal district of Baracoa, province of Santiago. Population 547.

Imias, Arroyo; small branch of Arroyo la Concepcion, in province of Puerto Principe.

Imias, Punta; point on south coast of province of Santiago.

Imias, Rio; river in southern part of municipal district of Baracoa, Santiago province.

Indico, Rio; right-hand branch of Baconao River, in Santiago Province.

Indio, Punta Del; point on north coast of Habana Province.

Indios; barrio in municipal district of Guantanamo, province of Santiago. Population 107.

Indios, Cayos de La; group of small islands west of Isla de Pinos.

Indios, Laguna Los; lake in municipal district of Guane, southern part of province of Pinar del Rio.

Indios, Loma de Los; hills on north coast of municipal district of Gibara, province of Santiago.

Indios, Rio de Los; stream flowing to west coast in Isla de Pinos.

Industria, Rio de La; river in Habana province flowing to south coast.

Ines de Sota, Cayo; island north of province of Pinar del Rio.

Infierno, Caleta del; cove on south coast of Isla de Pinos.

Infierno, Sierra del; mountains in municipal district of Pinar del Rio, province of Pinar del Rio.

Ingles, Caleta; cove on west coast of Isla de Pinos.

Ingles, Caleta de; cove on south coast of province of Santa Clara.

Ingles, Punta del; point on south coast of municipal district of Niquero, province of Santiago.

Ingleses, Punta las; point on west coast of province of Pinar del Rio.

Iridio, Arroyo; branch of Rio Turquina, near coast, in municipal district of Cobre, Santiago province.

Isabel; village in southern part of province of Matanzas.

Isabela, Punta; point on north coast of province of Santiago.

Isabela de Sagua; barrio in municipal district of Sagua la Grande, province of Santa Clara. Population 2,352.

Isabel Maria; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Isabel Maria; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 1,136.

Isla de Pinos; island forming a municipal district in province of Habana. Area 840 square miles. Population 3,199.

Isleta; barrio in municipal district of Guantanamo, province of Santiago. Population 80.

Itabo; village in municipal district of Marti, province of Matanzas.

Itabo; barrio in municipal district of Marti, province of Matanzas. Population 252.

Itabo, Arroyo; creek on west coast of Isla de Pinos.

Itabo, Loma; hill in Habana Province.

Java, Punta de la; point on south coast of province of Santiago.

Jababo, Rio; river heading in Loma Alta de Rompe and flowing south, between provinces of Santiago and Puerto Principe, into small harbor of same name. Length 37 miles.

Jabaco; village in municipal district of Cuevitas, province of Matanzas.

Jabaco; barrio in municipal district of Cuevitas, province of Matanzas. Population 997.

Jabacoa; village in municipal district of Rodas, province of Santa Clara.

Jabacoa; barrio in municipal district of Rodas, province of Santa Clara. Population 139.

Jabacoa, Rio; right-hand branch of Rio Damuji in southern part of Santa Clara.

Jabonillar; barrio in municipal district of Esperanza, province of Santa Clara. Population 720.

Jacan; barrio in municipal district of Palmillas, province of Matanzas. Population 1,642.

Jacinto, Arroyo; stream flowing to north coast in municipal district of Nuevitas, province of Puerto Principe.

Jacomino; village in Habana Province.

Jagua; village in Habana Province.

Jagua; village on south coast of province of Santa Clara.

Jagua, Loma la; hill in municipal district of Consolacion del Norte, province of Pinar del Rio.

Jagua, Rio de la; river heading in interior of Isla de Pinos and sinking in marsh near southeast coast.

Jaguara; town in eastern part of province of Santa Clara.

Jaguelles, Rio; right-hand branch of Rio Sagua la Chica, in province of Santa Clara.

Jaguey, Ensenada del; small bay on west coast of province of Pinar del Rio.

Jaguey, Laguna; small lake in San Antonio peninsula, province of Pinar del Rio.

Jaguey, Laguna del; lake in southern part of province of Puerto Principe, municipal district of Ciego de Avila.

Jaguey Punta; point on south coast of province of Santa Clara.

Jaguey Grande; municipal district in province of Matanzas. Area 326 square miles. Population 5,853.

Jaguey Grande; village in municipal district of same name, in province of Matanzas.

Jaguey Grande; barrio in municipal district of Jaguey Grande, province of Matanzas. Population 1,999.

Jagueyes, Arroyo; stream heading in Loma de las Muletas and flowing to coast, in municipal district of Gibara, province of Santiago.

Jaibo; village in municipal district of Guantanamo, province of Santiago.

Jaibo, Rio; left-hand branch of Guantanamo River, in Guantanamo municipal district, province of Santiago. Length 40 miles.

Jaibo Abajo; barrio in municipal district of Guantanamo, province of Santiago. Population 320.

Jaibo, Arriba; barrio in municipal district of Guantanamo, province of Santiago. Population 296.

Jaimanita; village in Habana Province.

Jaimanitas; barrio in municipal district of Cano, province of Habana.

Jamaica; village in Habana Province.

Jamaica; village in municipal district of Guantanamo, province of Santiago.

Jamaica; barrio in municipal district of Guantanamo, province of Santiago. Population 2,151.

Jamaica; barrio in municipal district of San Jose de las Lajas, province of Habana.

Jamal; barrio in municipal district of Baracoa, province of Santiago. Population 1,024.

Jaragua, Punta; point on north coast of municipal district of Baracoa, province of Santiago.

Jarahueca; village in municipal district of Alto Songo, province of Santiago.

Jarahueca; barrio in municipal district of Alto Songo, province of Santiago. Population 544.

Jarahueca, Rio; right-hand branch of Rio de los Joturus, in Santiago Province.

Jarao, Arroyo; small branch of Rio Gayajana, in municipal district of Sancti Spiritus, province of Santa Clara.

Jarico, Arroyo; short right-hand branch of Rio Sevilla, in province of Puerto Principe.

Jarro, Bahia de; small bay on north coast of Santiago Province, municipal district of Holguin.

Jarro, Punta; point on south coast of province of Santiago, municipal district ot Manzanillo.

Jarrola, Laguna; small lake in San Antonio peninsula, province of Pinar del Rio.

Jaruco; municipal district in province of Habana. Area 74 square miles. Population 4,076.

Jaruco; an interior city of Habana. Population 1,139.

Jaruco; barrio in municipal district of Jaruco, province of Habana.

Jaruco, Punta Conde; point on south coast of province of Santiago.

Jaruco, Rio; river in Habana Province flowing to north coast.

Jatia, Estero la; stream flowing to west coast in municipal district of Puerto Principe, province of Puerto Principe.

Jatibonico del Norte, Rio; river in northern part of province of Puerto Principe flowing to north coast. Length 35 miles.

Jatibonico del Sur, Rio; river heading in Sierra de Matahambre, in province of Santa Clara, and flowing south between provinces of Santa Clara and Puerto Principe to coast. Length 55 miles.

Jatibonico, Sierra de; mountains in western part of province of Puerto Principe.

Jaula; barrio in municipal district of Tapaste, province of Habana.

Jaula, Laguna; small lake in San Antonio peninsula, province of Pinar del Rio.

Jaula, Loma de la; hill in Habana Province.

Jerez; barrio in municipal district of Guira de Melena, province of Habana.

Jesus del Monte; village in Habana Province, suburb of Habana.

Jesus Maria; barrio in municipal district of Bejucal, province of Habana.

Jibacoa; town in western part of province of Santiago, municipal district of Manzanillo.

Jibacoa; village in Habana Province.

Jibacoa; barrio in municipal district of Manzanillo, province of Santiago. Population 2,024.

Jibacoa; barrio in municipal district of Santa Cruz del Norte, province of Habana.

Jibacoa, Rio; river in Habana Province, flowing to north coast.

Jibacoa, Rio; small branch of Rio Guanayara, in southern part of province of Santa Clara.

Jibara, Lagunas de; small lakes in municipal district of Cienfuegos, province of Santa Clara.

Jibaro; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 433.

Jibaro, Cayo; islet north of province of Pinar del Rio.

Jicotea; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 414.

Jicotea; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 706.

Jicotea; barrio in municipal district of San Diego del Valle, province of Santa Clara. Population 665.

Jicotea; barrio in municipal district of Santo Domingo, province of Santa Clara.

Jicotea, Arroyo; left-hand branch of Rio Sagua la Grande, in province of Santa Clara.

Jicotea, Brazo de; stream flowing to coast in western part of province of Pinar del Rio.

Jicotea, Rio; small river flowing to west coast in municipal district of Bayamo, Santiago Province.

Jicotea, Rio; river in southwestern part of province of Santiago. Heads in Sierra Maestra and flows northwestward into Buena Esperanza Bay. Length 35 miles.

Jicotea, Rio; river in province of Puerto Principe flowing to south coast. Length 30 miles.

Jigua, Rio; right-hand branch of Rio Cautillo, in municipal district of Jiguani, province of Santiago.

Jiguani; municipal district in province of Santiago. Area 495 square miles. Population 10,495.

Jiguani; village in municipal district of Jiguani, province of Santiago.

Jiguey, Rio; river in province of Puerto Principe. Heads in Sierra de Cubitas and flows northwest to coast. Length 35 miles.

Jiguiamo, Rio; left-hand branch of Rio Sagua la Grande, in province of Santa Clara. Length 20 miles.

Jimiru, Arroyo; small left-hand branch of Rio Contramaestre, in province of Puerto Principe.

Jiquiabo; barrio in municipal district of Santo Domingo, province of Santa Clara.

Jiquiabo; village in municipal district of Santo Domingo, province of Santa Clara.

Jiquimas; barrio in municipal district of Trinidad, province of Santa Clara. Population 825.

Jiquimu, Arroyo; stream flowing to north coast in province of Santa Clara.

Jiriquias, Punta de; point on north coast of Habana Province.

Joa, Ensenada de; small harbor on south coast of municipal district of Guantanamo, province of Santiago.

Jobabo; village in municipal district of Gibara, province of Santiago.

Jobabo; barrio in municipal district of Gibara, province of Santiago. Population 1,266.

Jobaco; barrio in municipal district of Mariel, province of Pinar del Rio.

Jobo; barrio in municipal district of San Nicolas, province of Habana.

Jobo, Arroyo del; right-hand branch of Rio Caunao, in municipal district of Puerto Principe, province of Puerto Principe.

Jobo, Sierra del; mountains in eastern part of province of Santiago.

Jobo, Lomas del; hills in municipal district of Artemisa, province of Pinar del Rio.

Jojo, Ensenada and **Surgidero**; small bay and anchorage on south coast of province of Santiago.

Jojo, Punta de; point on south coast of province of Santiago.

Jojo, Rio; river in eastern part of Santiago province. It heads in Sierra de Aragon and flows southeastward and southwestward to south coast. Length 30 miles.

Jorabado, Caleta del; small bay on south coast of Isla de Pinos.

Joturus, Rio de los; left-hand branch of Mayari River, in Santiago Province.

Jovellanos; municipal district in province of Matanzas. Area 61 square miles. Population 7,529.

Jovellanos; an interior city of province of Matanzas. Population 4,721.

Jovero, Laguna; lake in municipal district of Guane, southern part of province of Pinar del Rio.

Juaco; barrio in municipal district of Baracoa, province of Santiago. Population 1,425.

Juaco; village in southeastern part of municipal district of Baracoa, province of Santiago.

Juaco, Rio; river in eastern part of province of Santiago.

Juan Danuo, Alto de; hill on north coast of Cayo Sabinal, province of Puerto Principe.

Juan Diaz; village in northern part of municipal district of Sagua de Tanamo, province of Santiago.

Juan Diaz; barrio in municipal district of Sagua de Tanamo, province of Santiago. Population 714.

Juan Francisco, Ensenada; creek and cove on north coast of province of Santa Clara, municipal district of Las Vueltas.

Juan Gomez; barrio in municipal district of Guane, province of Pinar del Rio. Population 912.

Juan Griego, Cayos de; islands off north coast of province of Puerto Principe.

Juan Hernandez, Punta; point on south coast of province of Puerto Principe, municipal district of Moron.

Juan Lopez, Rio; river flowing to north coast in province of Santa Clara. Length 24 miles.

Juan Luis, Cayos de; group of islets south of Zapata peninsula, province of Santa Clara.

Juan Martinez, Arroyo; left-hand branch of Rio Caunao, in municipal district of Puerto Principe, province of Puerto Principe.

Juan Saez, Alta de; hill near south coast of Cayo Romano.

Juba, Caleta de la; cove on south coast of province of Santiago.

Jucaibama; town in western part of municipal district of Bayamo, province of Santiago.

Jucaral, Arroyo; small stream flowing to coast in southern part of province of Pinar del Rio.

Jucaro; town on north coast of province of Matanzas, near city of Cardenas.

Jucaro; town on south coast of province of Puerto Principe. Terminus of the Jucaro and Moron Railway.

Jucaro; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 468.

Jucaro, Laguna; small lake in the coast swamps of province of Puerto Principe.

Jucaro, Laguna del; lake near north coast in province of Matanzas.

Jucaro, Punta del; point on south coast of province of Puerto Principe, municipal district of Moron.

Jucaro, Rio del; a distributary of Rio San Anton in northern part of province of Matanzas.

Jucaro, Surgidero; anchorage on north coast of province of Matanzas.

Judas, Cayo; small island north of province of Puerto Principe.

Judas, Punta de; point on north coast of province of Santa Clara, municipal district of Yaguajay.

Judas, Sierra de; mountains on the north coast of province of Santa Clara, municipal district of Yaguajay.

Judas de la Cunagua, Sierra de; hills in northern part of municipal district of Moron, province of Puerto Principe.

Judio, Arroyo; short left-hand branch of Rio Tana, province of Puerto Principe.

Judio, Punta del; point on north coast of Habana Province.

Julia, Punta; point on west coast of province of Santiago, municipal district of Bayamo.

Juliana, Arroyo; right-hand branch of Duaba River, in Santiago Province.

Julian Diaz; municipal district in province of Pinar del Rio. Area 103 square miles. Population 1,871.

Julian Diaz; barrio in municipal district of Julian Diaz, province of Pinar del Rio.

Julias, Cayo; island northwest of province of Pinar del Rio.

Julias, Punta; point on northwest coast of province of Pinar del Rio.

Julici, Punta; point on south coast of municipal district of Santiago de Cuba, province of Santiago.

Julici, Surgidero; anchorage on south coast of municipal district of Santiago de Cuba, province of Santiago.

Jumagua; barrio in municipal district of Sagua la Grande, province of Santa Clara. Population 2,473.

Juncal, Laguna del; lake near south coast in province of Santa Clara, municipal district of Sancti Spiritus.

Junco; town on south coast of province of Puerto Principe in municipal district of Santa Cruz del Sur.

Junco; barrio in municipal district of Santa Cruz del Sur, province of Puerto Principe. Population 1,083.

Junco, Arroyo del; stream in northern part of province of Puerto Principe, uniting with Arroyo Corrales to form Arroyo de Robles.

Junco, Punta del; point on south coast of province of Puerto Principe.

Juqui; barrio in municipal district of Santo Domingo, province of Santa Clara.

Juraco, Surgidero del; anchorage on coast of municipal district of Cobre, southern part of Santiago Province.

Juragua, Rio; small river in southern part of municipal district of Santiago de Cuba, province of Santiago.

Juraguasito; river and anchorage on southern coast of municipal district of Santiago de Cuba, province of Santiago.

Juribacoa; barrio in municipal district of Guira de Melena, province of Habana. Population 311.

Justin, Rio; river in Habana Province, flowing to north coast.

Laberinto de Doce Leguas; group of low islands south of province of Puerto Principe.

La Bija; village in municipal district of Cabezas, western part of province of Matanzas.

La Caimanera; village in municipal district of Guantanamo, on Bay of Guantanamo, province of Santiago.

La Caridad; barrio in municipal district of Holguin, province of Santiago. Population 1,063.

La Catalina; village in Habana Province.

La Ceja; barrio and village in municipal district of Mantua, province of Pinar del Rio.

La Cidra; village in municipal district of Santa Ana, province of Matanzas.

La Cruz; barrio in municipal district of Santa Clara, province of Santa Clara. Population 2,111.

La Cuaba; village in municipal district of Holguin, province of Santiago.

Ladrillo, Punta; point on south coast of province of Santa Clara at mouth of Rio Zaza.

Ladrones, Cayo; islet off north coast of province of Puerto Principe.

La Entrada; village in municipal district of Holguin, Province of Santiago.

La Esperanza, Montes de; hills in Habana Province.

La Fabrica, Punta; point on north coast of municipal district of Baracoa, province of Santiago.

La Grifa; barrio in municipal district of Guane, province of Pinar del Rio. Population 2,113.

La Guanaja; town on north coast of province of Puerto Principe in municipal district of Puerto Principe.

Laguna Blanca; town in municipal district of Bayamo, province of Santiago, near city of Bayamo.

Laguna Blanca; barrio in municipal district of Bayamo, province of Santiago. Population 1,856.

Laguna, Cayo; islet south of province of Santa Clara.

Laguna de Piedra; barrio in municipal district of Viñales, province of Pinar del Rio. Population 2,328.

Lagunas; barrio in municipal district of Caney, province of Santiago.

Lagunillas; town in municipal district of Cardenas, province of Matanzas.

Lagunillas; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio. Population 1,238.

La Isabela; town at mouth of Rio Sagua la Grande, on north coast of province of Santa Clara.

La Jagua; village in municipal district of Consolacion del Norte, province of Pinar del Rio.

La Jagua; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio. Population 1,567.

La Jagua; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

Lajas (Las); municipal district in province of Santa Clara. Area 136 square miles. Population 9,603.

Lajas; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Lajas; village in municipal district of Lajas, province of Santa Clara.

Lajas; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

Lajas; barrio in municipal district of Guantanamo, province of Santiago. Population 1,371.

Lajas, Punta de las; point on north coast of Cayo Sabinal, province of Puerto Principe.

Lajas, Rio; small branch of Rio Turquina, in southern part of Santiago Province.

Lajatas, Rio; right-hand branch of Rio Damuji, in province of Santa Clara.

La Leña; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

La Luz; village in municipal district of San Luis, province of Santiago.

La Luz; barrio in municipal district of San Luis, province of Santiago. Population 618.

La Luz, Rio; branch of Rio Santa Barbara, in province of Matanzas.

La Luz, Rio; tributary to Rio Nuevo Mayabeque, in Habana Province.

La Majagua, Punta; point on south coast of Habana Province.

La Majagua, Rio; river in Habana Province, flowing to south coast.

La Palma; village in municipal district of Sabanilla, province of Matanzas.

La Palma; barrio and village in municipal district of Consolacion del Norte, province of Pinar del Rio.

La Palma; barrio in municipal district of Holguin, province of Santiago. Population 2,101.

La Paz; barrio in municipal district of Ceiba del Agua, province of Habana.

La Paz; barrio in municipal district of Alquizar, province of Habana. Population 1,011.

La Plata, Ensenada and **Rio**; river and small harbor on south coast of province of Santiago, municipal district of Cobre.

La Quinta; village in municipal district of Las Vueltas, northern part of province of Santa Clara.

Larga, Bahia; bay on south coast of municipal district of Cobre, province of Santiago.

Laga, Caleta; cove on south coast of San Antonio Peninsula, province of Pinar del Rio.

Larga, Laguna; lake in municipal district of Guane, southern part of province of Pinar del Rio.

Largo, Arroyo; right-hand branch of Duaba River, province of Santiago.

Larguela, Laguna; lake in municipal district of Guane, southern part of province of Pinar del Rio.

La Salud; village in Habana province.

Las Bocas; village in municipal district of Gibara, province of Santiago.

Las Cuchillas; barrio in municipal district of Palma Soriano, province of Santiago. Population 1,988.

La Sierra; village in municipal district of Los Palacios, province of Pinar del Rio.

La Sierra; village near south coast in municipal district of Cienfuegos, province of Santa Clara.

La Sierra; barrio in municipal district of Santa Cruz del Norte, province of Habana.

Las Lajas; village in Guantanamo municipal district, near Guantanamo Bay, province of Santiago.

Las Mangas; village in municipal district of Candelaria, province of Pinar del Rio.

Las Mangas; barrio in municipal district of Candelaria, province of Pinar del Rio. Population 1,280.

Las Minas; village in northern part of province of Matanzas.

La Socarrona; hills in municipal district of Mayari, province of Santiago.

Las Ovas; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Las Pozas; village near north coast in municipal district of Bahia Honda, province of Pinar del Rio.

Las Vegas; village in Habana Province.

Las Vegas, Rio; river in Habana Province, flowing to south coast.

Las Yeguas; town in western part of municipal district of Puerto Principe, province of Puerto Principe.

La Teja; village on north coast in municipal district of Marfi, province of Matanzas.

La Teja; barrio in municipal district of Marti, province of Matanzas. Population 695.

Launaito, Rio; small river near south coast, in province of Santa Clara.

La Union; village in western part of province of Matanzas.

Lavanderas, Punta; point on north coast of province of Pinar del Rio.

La Vega; village in municipal district of Holguin, Santiago Province.

La Vivora; village in Habana Province.

La Yaba; town in province of Puerto Principe, near the city of Puerto Principe.

Lazarino, Arroyo; left-hand branch of Tio Bio, in municipal district of Mayari, province of Santiago.

Lazaro; barrio in municipal district of Mantua, province of Pinar del Rio.

Lazaro, Rio; left-hand branch of Rio Caunao, in municipal district of Puerto Principe, province of Puerto Principe.

Lazaro Lopez; town in western part of province of Puerto Principe, municipal district of Ciego de Avila.

Lazaro Lopez; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 1,121.

Lazos, Ensenada los; small bay on western coast of Pinar del Rio.

Lebisa, Bahia de; bay on north coast of province of Santiago, municipal district of Mayari.

Lebisa, Cayo; small island off north coast of province of Pinar del Rio.

Lebisa, Rio; river in municipal district of Mayari, province of Santiago. Rises in Micaro Mountains and flows to north coast.

Lebistica, Rio; short stream flowing to north coast in municipal district of Mayari, Santiago Province.

Lechuga; barrio and village in municipal district of Managua, province of Habana.

Lechuga, Rio; branch of Rio Almendares, in Habana Province.

Lechuza, Arroyo; right-hand branch of Yumuri River, in province of Santiago.

Legua, Arroyo de la; right-hand branch of Rio de las Caravelas, near coast, in municipal district of Nuevitas, Santiago Province.

Lelderos, Arroyo los; left-hand branch of Rio de Guayabano, municipal district of Guantanamo, province of Santiago.

Leña; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio. Population 914.

Leña, Cayos de la; group of islands north of San Antonio Peninsula, province of Pinar del Rio.

Leones, Punta; point on south coast of San Antonio Peninsula, province of Pinar del Rio.

Lima; barrio in municipal district of Cabezas, province of Matanzas. Population 612.

Limon, Sierra de; mountains in western part of province of Matanzas.

Limonar; an interior city of Matanzas. Population 2,876.

Limonar; village in municipal district of Guamacaro, province of Matanzas.

Limones; town in municipal district of Puerto Principe, province of Puerto Principe.

Limones; barrio and village in municipal district of Los Palacios, province of Pinar del Rio.

Limones; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 830.

Limones; barrio in municipal district of Rodas, province of Santa Clara. Population 2,535.

Limones, Arroyo; stream sinking in Laguna de Baja, in province of Santa Clara.

Limones, Arroyo; right-hand branch of Rio Grande, in province of Puerto Principe.

Limones, Loma; hill in municipal district of Ceja de Pablo, province of Santa Clara.

Limones, Punta; point on north coast of province of Santa Clara.

Limones, Rio; right-hand branch of Rio Juan Lopez, in municipal district of Ceja de Pablo, province of Santa Clara.

Limones, Rio; river in southwestern part of province of Santiago, flowing to coast.

Limones, Sierra de; mountains in municipal district of Los Palacios, province of Pinar del Rio.

Limpio Grande, Arroyo; stream in municipal district of Ciego de Avila, province of Puerto Principe.

Linares, Sierra de; mountains in municipal district of San Diego de los Baños, province of Pinar del Rio.

Linch; barrio in municipal district of Macuriges, province of Matanzas.

Lindero, Arroyo del; right-hand branch of Rio Cascorro, province of Puerto Principe.

Lindero, Punta del; point on north coast of Isla de Pinos.

Lisa; barrio in municipal district of Marianao, province of Habana. Population 680.

Litoral de los Pesqueros, Cienego; large marsh in southwestern part of province of Pinar del Rio.

Llanda; village in municipal district of San Luis, province of Pinar del Rio.

Llanda, barrio in municipal district of San Luis, province of Pinar del Rio. Population 415.

Llamitas, Arroyo; small stream flowing to south coast in municipal district of Cobre, province of Santiago.

Llimite, Punta de; point on south coast of Isla de Pinos.

Loma, Cayo la; islet off north coast of province of Pinar del Rio.

Loma Cruz; village in municipal district of Santa Clara, province of Santa Clara.

Loma de Tierra; village in Habana Province.

Loma del Gato; barrio in municipal district of Alto Songo, province of Santiago. Population 585.

Lomas; barrio in municipal district of Candelaria, province of Pinar del Rio.

Lomas de Candela; village in Habana Province.

Lomas Grandes; village in municipal district of Camarones, province of Santa Clara.

Lomas Grandes; barrio in municipal district of San Fernando, province of Santa Clara. Population 786.

Lopez; barrio in municipal district of Jaguey Grande, province of Matanzas. Population 1,445.

Los Acostas; barrio in municipal district of Guane, province of Pinar del Rio.

Los Dorados; village in municipal district of Palma Soriano, province of Santiago.

Los Guiros; village in municipal district of Holguin, Santiago Province.

Los Palacios; municipal district in province of Pinar del Rio. Area 199 square miles. Population 2,456.

Los Palacios; town in municipal district of Los Palacios, province of Pinar del Rio.

Los Palacios; barrio in municipal district of Los Palacios, province of Pinar del Rio. Population 1,549.

Los Patos; village in Habana Province.

Los Pilos; village on Buey River, in western part of municipal district of Bayamo, province of Santiago.

Los Puentas; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio. Population 594.

Los Quemado; village in Habana Province.

Lucas, Cayo; island off north coast of province of Santa Clara.

Lucia; barrio in municipal district of Bolondron, province of Matanzas.

Lucrecia, Ensenado del; small bay on coast of municipal district of Gibara, northern part of province of Santiago.

Lugareno; barrio in municipal district of Nuevitas, province of Puerto Principe. Population 1,510.

Lugo, Caleta de; cove on west coast of Isla de Pinos.

Lugo, Punta de; point on west coast of Isla de Pinos.

Luis Lazo; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio. Population 4,193.

Luis Varona, Arroyo; right-hand branch of Rio Duran, province of Puerto Principe.

Luna, Punta; point on south coast of province of Santa Clara, at mouth of Rio Arimao.

Lursa, Montes de la; hills in Habana Province.

Luyano; village in Habana Province.

Mabujina, Rio; right-hand branch of Rio Manati in province of Santa Clara.

Macagua; municipal district in province of Matanzas. Area 105 square miles. Population 5,042.

Macagua; an interior city of Matanzas. Population 1,467.

Macagual; barrio in municipal district of Mariel, province of Pinar del Rio.

Macaguaney, Arroyo; right-hand branch of Duaba River, province of Santiago.

Macambo, Rio; river in southern part of municipal district of Baracoa, province of Santiago.

Maceo; barrio in municipal district of Jaruco, province of Habana.

Machilo, Cayo; island north of province of Matanzas.

Macho, Cayo; island north of province of Matanzas.

Macho, Surgidero; anchorage on south coast of municipal district of Cobre, Santiago Province.

Macias, Punta de; point on north coast of Habana Province.

Macio; village on south coast of province of Santiago in municipal district of Cobre.

Macio; barrio in municipal district of Cobre, province of Santiago. Population 92.

Macio, Arroyo; creek in southern part of municipal district of Cobre, province of Santiago.

Macio, Laguna de; small lake near coast in municipal district of Consolacion del Sur, southern part of province of Pinar del Rio.

Macio, Rio del; river flowing to south coast in municipal district of Cobre, Santiago Province.

Macio, Surgidero del; anchorage on south coast of province of Santiago, municipal district of Cobre.

Macuge, Rio; left-hand branch of Rio Cauto, province of Santiago, municipal district of Cobre.

Macujual; village in municipal district of Guanajay, northern part of province of Pinar del Rio.

Macuriges; municipal district in province of Matanzas. Area 243 square miles. Population 10,405.

Macuriges; village in western part of municipal district of Guantanamo, province of Santiago.

Macuriges; village in municipal district of Los Palacios, southern part of province of Pinar del Rio.

Macuriges; barrio in municipal district of Guantanamo, province of Santiago. Population 492.

Macuriges; barrio in municipal district of Los Palacios, province of Pinar del Rio. Population 238.

Macuriges, Laguna; lake in municipal district of Los Palacios, province of Pinar del Rio.

Macuriges, Laguna; lake in municipal district of Macuriges, province of Matanzas.

Macuriges, Rio; left-hand branch of Rio Guantanamo, in municipal district of Guantanamo, province of Santiago.

Macuryes, Boca; small bay on west coast of province of Puerto Principe.

Macuryes, Punta; point on west coast of province of Puerto Principe.

Madruga; municipal district in province of Habana. Area 58 square miles. Population 3,744.

Madruga; an interior city of Habana. Population 2,004.

Maestra, Sierra; highest and longest range of mountains in Cuba. They extend from east to west along the southern coast of the province of Santiago, attaining in many parts a height exceeding 5,000 feet, and culminating in Pico Turquino, reputed to have an altitude of 8,320 feet.

Magabuna, Arroyo; right-hand branch of Rio Zaza, in southern part of province of Santa Clara.

Magancilla, Arroyo; left-hand branch of Arroyo la Concepcion, province of Santiago.

Magarabomba; town in western part of municipal district of Puerto Principe, province of Puerto Principe.

Magarabomba; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 1,304.

Magdalena; village in municipal district of Cabezas, western part of province of Matanzas.

Magdalena; barrio in municipal district of Cabezas, province of Matanzas. Population 229.

Magdalena, Rio de la; river in southern part of province of Santa Clara, sinking in Cienega Zapata.

Magdalena, Surgidero and Rio; river and anchorage in southern part of municipal district of Cobre, province of Santiago.

Mageres, Arroyo las; small branch of Rio Santa Rosa in western part of province of Pinar del Rio.

Magibacoa, Rio; left-hand branch of Rio Naranjo in municipal district of Holguin, Santiago Province.

Maguaraya Abajo; barrio in municipal district of San Diego del Valle, province of Santa Clara.

Maguaraya Arriba; barrio in municipal district of San Diego del Valle, province of Santa Clara.

Maguey, Sierra del; mountains in municipal district of Guantanamo, province of Santiago.

Maisi; village near east coast of municipal district of Baracoa, province of Santiago.

Maisi; barrio in municipal district of Baracoa, province of Santiago. Population 108.

Maisi, Punta; point on east coast of province of Santiago, the easternmost point of Cuba.

Maisi, Rio; river in eastern part of municipal district of Baracoa, province of Santiago.

Majagebo, Rio; right-hand branch of Rio Cauto, province of Santiago.

Majagua, Punta de la; point on west coast of Isla de Pinos.

Majagua, Rio; river flowing to south coast in province of Habana.

Majanda, Ensenada de; small bay on south coast of province of Pinar del Rio.

Majanda, Punta; point on north coast of province of Santiago.

Majangua; barrio in municipal district of Madruga, province of Habana.

Mal Abrigo, Cayo; small island southwest of province of Puerto Principe.

Mala Fama, Arroyo; stream flowing to south coast in municipal district of Puerto Principe, province of Puerto Principe.

Malagua, Arroyo; small branch of Rio Manicaragua in southern part of province of Santa Clara.

Malaguela, Punta; point on north coast of Santiago Province, municipal district of Puerto Padre.

Malahambre, Punta; point on north coast of province of Santiago.

Mal Año, Punta; point on south coast of province of Santiago.

Mala Noche; barrio in municipal district of Holguin, province of Santiago. Population 703.

Mala Rueca, Rio; river in province of Puerto Principe, flowing to south coast. Length 25 miles.

Malas Aguas; village near north coast in municipal district of Mantua, province of Pinar del Rio.

Malas Aguas, Ensenada; small bay on north coast of Pinar del Rio.

Malas Aguas, Punta; point on north coast of province of Pinar del Rio.

Malas Aguas, Rio; river flowing to north coast in western part of province of Pinar del Rio.

Male, Cayos del; islets off south coast of province of Puerto Principe.

Mal Pais, Rio de; left-hand branch of Rio de Santa Fe, Isla de Pinos.

Maltiempo; barrio in municipal district of Cruces, province of Santa Clara. Population 2,284.

Mamey Duro; barrio in municipal district of Bainoa, province of Habana.

Mameyes; village in municipal district of Cardenas, province of Matanzas.

Mamposton, Rio; branch of Rio Nuevo Mayabeque in Habana Province.

Manacal, Rio; short coast river in western part of province of Santiago.

Manacal, Punta; point on west coast of province of Santiago.

Manacas; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 1,540.

Manacas; barrio in municipal district of Cobre, province of Santiago. Population 1,426.

Manacas; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 475.

Manacas; barrio and village in municipal district of Santo Domingo, province of Santa Clara.

Manacas, Arroyo; left-hand branch of Rio Piedras, in province of Matanzas.

Manacas, Arroyo; left-hand branch of Arroyo Pablo, province of Puerto Principe.

Manacas, Arroyo; left-hand branch of Rio Contramaestra in municipal district of Jiguani in Santiago Province.

Managas; town in western part of municipal district of Bayamo, province of Santiago.

Managua; municipal district in province of Habana. Area 58 square miles. Population 2,887.

Managua; an interior city of Habana. Population 1,063.

Managua, Rio; left-hand branch of Rio Cautillo in municipal district of Bayamo, Santiago Province.

Managua, Rio; left-hand branch of Yumuri River in province of Santiago.

Managua, Tetas de; hills in Habana Province.

Managuaco; village in municipal district of Holguin, Santiago Province.

Managuaco; barrio in municipal district of San Jose de las Lajas, province of Habana.

Managuimba, Rio; river flowing to north coast in province of Santa Clara. Length 15 miles.

Manaja, Arroyo; small stream near west coast in province of Pinar del Rio.

Manaquitas, Arroyo; left-hand branch of Rio Sagua la Grande in province of Santa Clara.

Manati; town in northern part of municipal district of Puerto Padre, province of Santiago.

Manati; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,064.

Manati, Estero; inlet and creek on west coast of province of Puerto Principe.

Manati, Mesa; near north coast of municipal district of Puerto Padre, province of Santiago.

Manati, Punta; point on south coast of municipal district of Guantanamo, province of Santiago.

Manati, Punta; point on south coast of province of Santiago, municipal district of Cobre.

Manati, Punta; point on north coast of Santiago Province.

Manati, Punta; point on south coast of province of Santa Clara, near mouth of Rio Manati.

Manati, Rio; small river flowing to south coast in municipal district of Cobre, province of Santiago.

Manati, Rio; river flowing to south coast in province of Santa Clara, municipal district of Trinidad. Length 47 miles.

Manati Oriental, Punta; point on south coast of province of Santa Clara, municipal district of Sancti Spiritus.

Manautuaba; village in municipal district of Cobre, province of Santiago.

Mandinga; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 488.

Mandinga; village in municipal district of Cienfuegos, province of Santa Clara.

Mandinga; barrio in municipal district of Baracoa, province of Santiago. Population 910.

Maneaderos, Cerro de los; hill in western part of Isla de Pinos.

Manglarito, Punta; point on Peninsula de la Torre, north coast of province of Santiago.

Mangle, Punta del; point on north coast of municipal district of Baracoa, province of Santiago.

Mangle, Punta de; point on east coast of province of Santiago.

Mangles, Punta; point on north coast of Habana Province.

Mangles Altas, Punta; point on south coast of province of Santa Clara.

Mangles, Islas de; group of small islands north of Isla de Pinos.

Manglito, Punta del; point on east coast of municipal district of Gibara, province of Santiago.

Mango; barrio in municipal district of San Diego del Valle, province of Santa Clara. Population 302.

Mangorito, Punta; point on north coast of province of Santiago.

Manguito; a city of Matanzas. Population 1,534.

Manguito; barrio in municipal district of Palmillas, province of Matanzas. Population 3,289.

Maniabo, Rio; right-hand branch of Yarey River in municipal district of Puerto Principe, province of Santiago.

Maniabon; town in municipal district of Puerto Padre, province of Santiago.

Maniabon; barrio in municipal district of Puerto Padre, province of Santiago. Population 995.

Manicaragua; town in municipal district of Santa Clara, province of Santa Clara.

Manicaragua; barrio in municipal district of Santa Clara, province of Santa Clara. Population 2,916.

Manicaragua, Rio; right-hand branch of Rio Arimao in southern part of province of Santa Clara.

Manimani; barrio and village in municipal district of Bahia Honda, province of Pinar del Rio.

Manolica, Punta; point on south coast of Santiago Province, municipal district of Cobre.

Manteco, Arroyo; right-hand branch of Rio la Rioja, Santiago Province.

Mantilla; village in Habana Province.

Mantua; municipal district in province of Pinar del Rio. Area 634 square miles. Population 8,366.

Mantua; barrio and village in municipal district of Mantua, province of Pinar del Rio.

Mantua, Rio; river heading in Sierra de Francisco and flowing to west coast in province of Pinar del Rio. Length 33 miles.

Mantua, Rio; short stream flowing to south coast in province of Pinar del Rio.

Manui, Cayos la; group of small islands off north coast of province of Matanzas.

Manzanillo; municipal district in province of Santiago. Area 491 square miles. Population 32,288.

Manzanillo; a coast city of Santiago. Population 14,464.

Mapos, Laguna; lake near south coast of province of Santa Clara in municipal district of Sancti Spiritus.

Mapurisi, Punta; point on north coast of municipal district of Baracoa, province of Santiago.

Maracayero, Punta del; point on south coast of Isla de Pinos.

Maraguan; town in municipal district of Puerto Principe, province of Puerto Principe.

Maraguan; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 1,110.

Marañon, Arroyo; right-hand branch of Rio Coscorro, province of Puerto Principe.

Maravi, Rio; left-hand branch of Toa River in Santiago Province.

Mar, Cayos de la; islands north of province of Santa Clara.

Mar Celina, Punta; point on north coast of province of Puerto Principe.

Marchon, Caleta de; small bay on north coast of Santiago Province, municipal district of Puerto Padre.

Marcos, Arroyo; small left-hand branch of Rio Jobabo in Santiago Province.

Marcos Vazquez; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Marcos Vazquez; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 974.

Margarita, Arroyo; stream in municipal district of Gibara, province of Santiago.

Mariana, Sierra de; mountains in eastern part of municipal district of Guantanamo, province of Santiago.

Marianao; municipal district in province of Habana. Area 25 square miles. Population 8,593.

Marianao; city near north coast of Habana. Population 5,416.

Marianas, Lomas; hills in Habana Province.

Maria Rodriguez, Sierra de; mountains in municipal district of Santa Clara, province of Santa Clara.

Mariel; municipal district in province of Pinar del Rio. Area 95 square miles. Population 3,631.

Mariel; village in municipal district of Bahia Honda, on northern coast of province of Pinar del Rio.

Mariel; barrio in municipal district of Mariel, province of Pinar del Rio.

Mariel, Bahia; bay on north coast of province of Pinar del Rio.

Marroqui; town in western part of province of Puerto Principe, municipal district of Moron.

Marroquin; barrio in municipal district of Moron, province of Puerto Principe. Population 1,073.

Marta, Arroyo; right-hand branch of Rio Grande, in municipal district of Sagua de Tanamo, province of Santiago.

Marti; municipal district in province of Matanzas. Area 362 square miles. Population 8,905.

Marti, Norte; barrio in municipal district of Marti, province of Matanzas. Population 2,495.

Marti, Sur; barrio in municipal district of Marti, province of Matanzas. Population 396.

Martillo; village in municipal district of Holguin, Santiago Province.

Martillo, Punta; point on west coast of province of Santiago.

Martin, Cayo; small island about 12 miles north of province of Puerto Principe.

Martinas; barrio in municipal district of Guane, province of Pinar del Rio. Population 1,746.

Masio, Cayo del; island off south coast of province of Santa Clara in Ensenada de Cazones.

Mata; village on north coast of Santiago Province in municipal district of Baracoa.

Mata; village in municipal district of Calabazar, province of Santa Clara.

Mata; barrio in municipal district of Baracoa, province of Santiago. Population 738.

Mata, Punta de; point on north coast of province of Santiago.

Mata, Rio; small river in northern part of municipal district of Baracoa, province of Santiago.

Matagua, Arroyo; left-hand branch of Rio Arimao in southern part of province of Santa Clara.

Matahambre, Arroyo; small left-hand branch of Rio Malas Aguas, western part of province of Pinar del Rio.

Matahambre, Cayo: islet south of Zapata Peninsula, province of Santa Clara.

Matahambre, Laguna; small lake near north coast in municipal district of Cabañas, province of Pinar del Rio.

Matahambre, Punta de; point on Zapata Peninsula, south coast of province of Santa Clara.

Matahambre, Sierra de; mountains in northeastern part of province of Santa Clara.

Matamora, Montes de; mountains in municipal district of Holguin, province of Santiago.

Matamoras, Rio; right-hand branch of Rio Holguin, municipal district of Holguin, province of Santiago. Length 18 miles.

Matanceros, Cayo; small island north of province of Matanzas.

Matanzas; a province of Cuba, the smallest in area with the exception of Habana. It lies east of that province and is limited on the east by the province of Santa Clara. Its area is 3,700 square miles. Its surface is for the most part undulating or rolling. The population numbered in 1899, 202,214, the number of inhabitants to the square mile being 55. The province contains several cities of magnitude, whose population collectively forms 29 per cent of that of the province. Males are in excess of females to the extent of 3 per cent. Fifty-one per cent of the total population is composed of native-born whites, 9 per cent of foreign-born, and not less than 40 per cent of colored. The illiterate form 35 per cent of the entire population. The province is divided into 24 municipal districts. The capital and chief city is Matanzas, on the north coast.

Matanzas; municipal district in province of Matanzas. Area 320 square miles. Population 45,282.

Matanzas; coast city and capital of province of Matanzas. Population 36,374.

Matanzas, Bahia; bay on north coast of province of Matanzas.

Mata y Barro; barrio in municipal district of Calabazar, province of Santa Clara. Population 1,267.

Matemillas, Punta; point on north coast of Cayo Sabinal, province of Puerto Principe.

Matias, Cayo; islet east of Isla de Pinos.

Matochin, Punta; point on north coast of province of Santiago.

Maximo Gomez; municipal district in province of Matanzas. Area 152 square miles. Population 4,046.

Maximo Gomez; an interior city of Matanzas. Population 1,743.

Maximo Gomez; barrio in municipal district of Maximo Gomez, province of Matanzas. Population 2,292.

Maya; barrio in municipal district of Alto Songo, province of Santiago.

Maya, Punta; point on north coast of province of Matanzas.

Mayabe; village in municipal district of Holguin, province of Santiago.

Mayabequa, Rio; river in Habana Province flowing to south coast.

Mayabon; barrio in municipal district of Macagua, province of Matanzas. Population 1,092.

Mayabon, Rio; left-hand branch of Rio Rosario, province of Matanzas.

Mayaguano; barrio in municipal district of Batabano, province of Habana. Population 352.

Mayajigua; town in municipal district of Yaguajay, northeastern part of province of Santa Clara.

Mayajigua; barrio in municipal district of Yaguajay, province of Santa Clara. Population 1,284.

Mayanabo, Ensenada de; bay on north coast of province of Puerto Principe, in municipal district of Nuevitas.

Mayari; municipal district in province of Santiago. Area 1,009 square miles. Population 8,504.

Mayari; city near north coast in province of Santiago. Population 1,821.

Mayari; barrio in municipal district of San Cristobal, province of Pinar del Rio.

Mayari, Rio; river in Santiago province. Heads in Montes Seboruco and flows west and north into Bahia de Nipe. Length 45 miles.

Mayari Arriba; barrio in municipal district of Alto Songo, province of Santiago. Population 975.

Medanos, Punta Los; point on north coast of municipal district of Sagua de Tanamo, province of Santiago.

Media Casa; point on south coast of province of Pinar del Rio.

Media Luna; barrio in municipal district of Manzanillo, province of Santiago. Population 3,319.

Media Luna, Ensenada; small bay on west coast of municipal district of Manzanillo, province of Santiago.

Medidas; village in municipal district of Rodas, province of Santa Clara.

Medidas; barrio in municipal district of Rodas, province of Santa Clara. Population 1,327.

Medio, Farallon del; hills in eastern part of municipal district of Baracoa, province of Santiago.

Medio, Rio del; river flowing to coast in western part of province of Pinar del Rio.

Mejias, Laguna; small lake in municipal district of Holguin, province of Santiago.

Melena; an interior city of Habana Province. Population 5,016.

Melena; barrio in municipal district of Guira de Melena, province of Habana. Population 1,452.

Melena del Sur; municipal district in province of Habana. Area 137 square miles. Population 3,207.

Melones, Laguna Los; lake in San Antonio peninsula, western part of province of Pinar del Rio.

Melonicos, Sierra; mountains near south coast of municipal district of Baracoa, province of Santiago.

Memlo, Cayo; islet north of province of Matanzas.

Menchaca, Arroyo; stream flowing to south coast in municipal district of Ciego de Avila, province of Puerto Principe.

Mendez Capote; municipal district in province of Matanzas. Area 117 square miles. Population 2,158.

Mendez Capote 1; barrio in municipal district of Mendez Capote, province of Matanzas. Population 812.

Mendez Capote 2; barrio in municipal district of Mendez Capote, province of Matanzas. Population 425.

Mendoza, Monte de; hill in Habana Province.

Meneses; village in northern part of province of Santa Clara, municipal district of Yaguajay.

Meneses; barrio in municipal district of Yaguajay, province of Santa Clara. Population 1,658.

Meneses y Guelo, Sierra de; mountains near north coast in province of Santa Clara.

Menocal, Loma; hill in Habana Province.

Mercado; barrio in municipal district of Guantanamo, province of Santiago. Population 915.

Mercedes, Arroyo Las; small left-hand branch of Rio Samaraguacon in province of Puerto Principe.

Mercedita de Mojica, Loma; hill near north coast in municipal district of Mantua, province of Pinar del Rio.

Micaro, Sierra de; mountains in eastern part of municipal district of Mayari, province of Santiago.

Mico, Loma del; hill in western part of municipal district of Sagua de Tanamo, province of Santiago.

Miel, Rio; small stream in northern part of municipal district of Baracoa, Santiago Province.

Miguel; village in northern part of municipal district of Sagua de Tanamo, province of Santiago.

Miguel; barrio in municipal district of Sagua de Tanamo, province of Santiago. Population 665.

Miguel, Arroyo; right-hand branch of Rio la Rioja, in Santiago Province.

Miguel, Rio; river in municipal district of Sagua de Tanamo, province of Santiago.

Mijial, Arroyo; small branch of Arroyo Yagua, in province of Santa Clara.

Mijias, Rio; right-hand branch of Rio Baguano in municipal district of Holguin, Santiago Province.

Mimanima, Surgidero de; anchorage on south coast of municipal district of Cobre, Santiago Province.

Minas; village in Habana Province.

Minas; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 2,318.

Minas; barrio in municipal district of San Cristobal, province of Pinar del Rio.

Minas, Arroyo; small branch of Arroyo los Pasos, in municipal district of Holguin, province of Santiago.

Minas, Arroyo; branch of Arroyo del Macho, in province of Puerto Principe.

Minas, Rio de las; left-hand branch of the Sabanilla River, in northern part of Santiago Province.

Minas y San German, Sierra de las; mountains in eastern part of Santiago Province.

Mira Cielos; barrio in municipal district of Candelaria, province of Pinar del Rio.

Miraflores, Arroyo; left-hand branch of Rio Caunao in municipal district of Moron, province of Puerto Principe.

Moa, Cayo; islet off north coast of municipal district of Baracoa, province of Santiago.

Moa, Rio de; river in province of Santiago. Heads in Cuchillas de Toa and flows north to coast. Length 20 miles.

Moa, Sierra de; mountains in northwestern part of municipal district of Baracoa, province of Santiago.

Mogel, Punta del; hill in municipal district of Jiguani, province of Santiago.

Mogon, Arroyo; left-hand branch of Rio Contramaestra in municipal district of Jiguani, province of Santiago.

Moja, Punta; point on west coast of province of Santiago, municipal district of Bayamo.

Moja Bragas, Cayos; group of small islands north of province of Santa Clara and between it and Cayo Fragoso.

Mojacasabe, Arroyo; right-hand branch of Rio los Gueros in province of Puerto Principe.

Mojacasabe, Arroyo; short left-hand branch of Rio de las Caravelas in municipal district of Puerto Principe, province of Puerto Principe.

Mojon, Arroyo; right-hand branch of Rio Muñoz, province of Puerto Principe.

Mola, Rio; river flowing to south coast in municipal district of Manzanillo, Santiago Province.

Molas, Punta de; point at extremity of Peninsula de Hicacos, on north coast of Matanzas.

Molina; barrio in municipal district of Mariel, province of Pinar del Rio.

Molina, Lomas de; hills in Habana Province.

Moncadero, Arroyo; small right-hand branch of Rio Cuyaguateje in western part of province of Pinar del Rio.

Mondejar; barrio in municipal district of Sabanilla, province of Matanzas.

Monjas; barrio in municipal district of San Antonio de los Baños, province of Habana. Population 925.

Mono, Cayo; islet north of province of Matanzas.

Monte, Cerro del; hill in central part of Isla de Pinos.

Monte, Laguna del; small lake in southeastern part of municipal district of Puerto Principe, province of Puerto Principe.

Monte Alto; barrio in municipal district of Macagua, province of Matanzas. Population 680.

Monte Cristo; village in southeastern part of municipal district of Baracoa, province of Santiago.

Monte Cristo; barrio in municipal district of Baracoa, province of Santiago. Population 739.

Monte dos Leguas; barrio in municipal district of San Luis, province of Santiago. Population 2,013.

Montefirme; barrio in municipal district of Cruces, province of Santa Clara. Population 678.

Monte Gorda, Punta; point on west coast of municipal district of Bayamo, province of Santiago.

Monte Oscuro, Rio; left-hand branch of Rio Cabreras, Santiago Province.

Montezuelo; village on river of same name in municipal district of Mantua, province of Pinar del Rio.

Montezuelo; barrio in municipal district of Mantua, province of Pinar del Rio.

Montezuelo, Rio; left-hand branch of Rio Mantua in western part of province of Pinar del Rio.

Mora, Arroyo; small branch of Arroyo Biajacas in southern part of province of Puerto Principe.

Mora, Ensenada de; small bay on south coast of municipal district of Manzanillo, Santiago Province.

Mora, Punta; point on south coast of Habana Province.

Morales, Lomas de; hills in Habana Province.

Mordaza; village in municipal district of Cartagena, province of Santa Clara.

Mordazo; barrio in municipal district of Santo Domingo, province of Santa Clara.

Morena, Lomas de; hills in northern part of province of Santa Clara.

Morillo, Punta; point on north coast of municipal district of Puerto Padre, Santiago Province.

Moron; municipal district in province of Puerto Principe. Area 1,620 square miles. Population 9,630.

Moron; city near north coast in province of Puerto Principe. Population 2,084.

Moron; village in municipal district of Alto Songo, province of Santiago.

Moron; barrio in municipal district of Alto Songo, province of Santiago. Population 927.

Moron, Albufera y Laguna; marshy lake on north coast of province of Puerto Principe, municipal district of Moron.

Morrillo; village in municipal district of Consolacion del Norte, province of Pinar del Rio.

Mosas, Rio; small river in western part of province of Matanzas.

Mosquitos; village near north coast in municipal district of Guanajay, province of Pinar del Rio.

Mosquitos; barrio in municipal district of Mariel, province of Pinar del Rio.

Mosquitos, Rio; river flowing to north coast in province of Pinar del Rio.

Mostacilla; barrio in municipal district of Roque, province of Matanzas. Population 688.

Motembo; barrio in municipal district of Marti, province of Matanzas. Population 2,188.

Muerto, Arroyo de; small left-hand branch near head of Rio San Pedro in province of Puerto Principe.

Muerto, Arroyo del; short left-hand branch of Rio Cauto in municipal district of Mayari, province of Santiago.

Muerto, Estero de las; a creek on south coast of province of Puerto Principe.

Muertos, Cayos de los; small islands off south coast of province of Puerto Principe.

Muertos, Punta de los; point on coast of municipal district of Nuevitas, province of Puerto Principe.

Mula, Laguna de la; lake in municipal district of Santa Cruz del Sur, province of Santiago.

Mulas, Punta de; point on east coast of municipal district of Gibara, province of Santiago.

Mulas, Punta de; point on south coast of province of Santa Clara.

Mulata; barrio and village in municipal district of Bahia Honda, province of Pinar del Rio.

Mulata, Laguna; small lake in municipal district of Holguin, province of Santiago.

Mulato, Arroyo del; left-hand branch of Rio Caunao in municipal district of Puerto Principe, province of Puerto Principe.

Muletas, Loma de las; hills near north coast of Santiago Province, in municipal district of Gibara.

Municion, Arroyo; right-hand branch of Rio Bio, province of Santiago.

Muñoz, Arroyo; short coast stream in municipal district of Trinidad, province of Santa Clara.

Muñoz, Rio; river in province of Puerto Principe. Heads in western part of municipal district of Puerto Principe and flows southwestward to coast. Length 40 miles.

Naja, Loma de; hill in Habana Province.

Najasa, Rio; river in province of Puerto Principe. Heads in northeastern part of province and flows southwestward and southward to coast. Length 60 miles.

Najasa, Sierra de; mountains in southern part of municipal district of Puerto Principe, province of Puerto Principe.

Naranjo; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

Naranjo, Ensenada; small bay on north coast of municipal district of Gibara, Santiago Province.

Naranjo, Arroyo; small left-hand branch of Rio Sevilla in municipal district of Puerto Principe, province of Puerto Principe.

Naranjo, Arroyo; short coast stream in municipal district of Cienfuegos, province of Santa Clara.

Naranjo, Loma de; hills in municipal district of Moron, province of Puerto Principe.

Naranjo, Rio; river in province of Santiago, flowing to north coast. Length about 23 miles.

Naranjo, Rio, right-hand branch of Rio Salado in Santiago Province, dividing municipal districts of Holguin and Puerto Padre for about 25 miles.

Naranjo, Rio; river flowing to south coast in province of Puerto Principe. Length 20 miles.

Naranjo, Rio; river in municipal district of Gibara, province of Santiago, flowing into Bahia de Banes.

Naranjo, Rio; left-hand branch of Toa River in Santiago Province.

Naraujal, Loma del; hills in municipal district of Santa Clara, province of Santa Clara.

Navajas; village in southern part of province of Matanzas.

Navarro, Rio; river flowing to west coast in province of Pinar del Rio.

Navas, Rio; short river in northern part of municipal district of Baracoa, province of Santiago.

Naza, Boca de; inlet on north coast of province of Pinar del Rio.

Nazareno; village in municipal district of Placetas, province of Santa Clara.

Nazareno; barrio and village in municipal district of Managua, province of Habana.

Nazareno; barrio in municipal district of Placetas, province of Santa Clara. Population 719.

Negra, Laga; small lake in western part of municipal district of Holguin, province of Santiago.

Negra, Punta; point on southeast coast of province of Santiago.

Negra, Santo de Punta; point on southeast coast of province of Santiago.

Negrillo, Estero del; inlet on south coast of province of Puerto Principe.

Negro, Cayo; islet off north coast of province of Santa Clara.

Negro, Rio; river in marshy region of province of Matanzas, tributary to Rio Hatiguanico.

Negros, Arroyo los. (See Guayacanes.)

Negros, Arroyo los; right-hand branch of Arroyo Menchaca in province of Puerto Principe.

Negros, Arroyo los; right-hand branch of Rio Guanajara in southern part of province of Santa Clara.

Negros, Lomas de los; hills in southern part of province of Santa Clara, municipal district of Santa Clara.

Negros, Punta los; point on south coast of province of Santa Clara.

Nibujon; village in northern part of Baracoa, province of Santiago.

Nibujon; barrio in municipal district of Baracoa, province of Santiago. Population 514.

Nibujon, Punta; point on north coast of municipal district of Baracoa, province of Santiago.

Nibujon, Rio; small river in northern part of Baracoa, province of Santiago.

Nigua, Arroyo; left-hand branch of Rio Naranjo, province of Santiago.

Nimanima; barrio in municipal district of Cobre, province of Santiago. Population 421.

Nipe, Bahia de; bay on north coast of province of Santiago.

Nipe, Rio; river in Santiago Province. Heads in western part of municipal district of Mayari and flows eastward and northward to coast. Length 15 miles.

Nipe, Sierra; mountains in municipal district of Mayari, province of Santiago.

Niquero (formed from Manzanillo); municipal district in province of Santiago. Area 145 square miles. Population 2,718.

Niquero; city near south coast of Santiago. Population 1,560.

Nombre de Dios; village near north coast in municipal district of Mantua, province of Pinar del Rio.

Nombre de Dios; barrio in municipal district of Guines, province of Habana.

Norte; barrio in municipal district of Alacranes, province of Matanzas. Population 1,267.

Norte; barrio in municipal district of Canasi, province of Matanzas. Population 1,624.

Nosa, Cayos de; group of small islands north of province of Santa Clara.

Novilla, Rio; small river in municipal district of Gibara, province of Santiago.

Novio, Lomas del; hills in Habana Province.

Nueva, Caleta; small bay on south coast of province of Santa Clara.

Nueva, Laguna; small lake in municipal district of Marti, province of Matanzas.

Nueva Gerona; village and barrio on north coast of Isla de Pinos.

Nueva Paz; municipal district in province of Habana. Area 151 square miles. Population 7,761.

Nueva Paz, an interior city of Habana. Population 2,294.

Nueva Paz; barrio in municipal district of Nueva Paz, province of Habana. Population 2,294.

Nuevas; village in municipal district of Esperanza, province of Santa Clara.

Nuevas; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 957.

Nuevas; barrio in municipal district of Esperanza, province of Santa Clara. Population 1,309.

Nuevas; barrio in municipal district of Santa Isabel de las Lajas, province of Santa Clara. Population 265.

Nuevas, Rio de las; river flowing to north coast in Isla de Pinos. Length 17 miles.

Nuevas, Rio las; river flowing to south coast in municipal district of Moron, province of Puerto Principe.

Nuevas de Jobosi; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 464.

Nuevas Grandes, Rio de; river 25 miles in length, rising in southern part of municipal district of Nuevitas, province of Puerto Principe, and flowing north into small bay of same name.

Nuevitas; municipal district in province of Puerto Principe. Area 1,034 square miles. Population 10,355.

Nuevitas; a coast city in province of Puerto Principe. Population 4,228.

Nuevitas, Arroyo de; stream flowing to north coast in municipal district of Nuevitas, province of Puerto Principe.

Nuevo Mayabeque, Rio; river in Habana Province flowing to south coast.

Obas, Laguna de las; lake in municipal district of Colon, province of Matanzas.

Obispo, Cayo; islet north of province of Pinar del Rio.

Obispo, Cayo del; islet off north coast of province of Santa Clara.

Obispo, Punta del; point on north coast of province of Santa Clara.

Ocampa, Cayo; island at mouth of Rio Caunao, south coast of province of Santa Clara.

Ochoa, Rio; left-hand branch of Rio Sagua la Chica in province of Santa Clara. Length 18 miles.

Ocujal; village in southern part of province of Santiago, near bay of Guantanamo.

Ocujal; barrio in municipal district of Guantanamo, province of Santiago. Population 90.

Ocujes, Punta; point on south coast of province of Santa Clara at mouth of Rio Tayabacoa.

Oeste; barrio in municipal district of Alacranes, province of Matanzas. Population 1,777.

Oeste; barrio in municipal district of Macagua, province of Matanzas. Population 1,029.

Ojo de Agua; village in municipal district of Cienfuegos, province of Santa Clara.

Ojo de Agua; town in western part of province of Santiago, municipal district of Puerto Padre.

Ojo de Agua; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 493.

Ojo de Agua; barrio in municipal district or Managua, province of Habana.

Ojo de Agua; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,157.

Ojo de Agua, Arroyo; stream flowing to north coast in province of Santa Clara.

Ojo de Agua, Arroyo; stream flowing to west coast in municipal district of Niquero, Santiago Province.

Ojo de Agua, Loma; hills in Habana Province.

Ojo de Agua, Rio; left-hand branch of Rio Contramaestra in municipal district of Jiguani, province of Santiago.

Ojo del Toro, Ensenada; small bay on south coast of municipal district of Niquero, province of Santiago.

Oliva, Lomas de; hills in Habana Province.

Organos, Sierra de los; range of mountains running through the province of Pinar del Rio, parallel to the coasts, with an average altitude of 2,000 feet and a maximum in Guajaybon of 2,500 feet.

Oriente; barrio in municipal district of Puerto Padre, province of Santiago. Population 2,471.

Orua, Punta; point on west coast of municipal district of Manzanillo, province of Santiago.

Oruita, Punta; point on west coast of municipal district of Manzanillo, Santiago Province.

Ovando, Cala de; cove and creek on east coast of province of Santiago.

Ovas; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 2,383.

Pabana, Paso; pass in Sierra del Jobo, province of Santiago.

Pablo; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Pablo; barrio in municipal district of Managua, province of Habana.

Pablo, Arroyo; stream in municipal district of Moron, province of Puerto Principe.

Padre, Lomas del; hills in Habana Province.

Padre, Punta; point on north coast of Puerto Padre, province of Santiago.

Padre, Punta del; point on south coast of province of Santa Clara.

Pajonal, Cayos del; group of small islands north of Cayos de la Tocinera, province of Santa Clara.

Palacios; barrio in municipal district of Julian Diaz, province of Pinar del Rio.

Palacios, Punta; point on south coast of municipal district of Niquero, Santiago Province.

Palacios, Rio los; outlet of Laguna Macuriges, flowing to south coast in province of Pinar del Rio.

Palenque; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Palenque; village in southern part of municipal district of Alto Songo, province of Santiago.

Palenque; barrio in municipal district of Alquizar, province of Habana. Population 1,933.

Palenque; barrio in municipal district of Alto Songo, province of Santiago. Population 1,900.

Palenque, El; hill in western part of province of Matanzas.

Palenquito; village in municipal district of Guantanamo, province of Santiago.

Palimino, barrio in municipal district of Ceiba del Agua, province of Habana.

Palizades; barrio in municipal district of San Luis, province of Pinar del Rio. Population 603.

Palizon, Arroyo el; stream flowing to south coast in municipal district of Puerto Principe, province of Puerto Principe.

Palizon, Cayo; islet south of province of Puerto Principe.

Palizon, Estero del; inlet on south coast of province of Puerto Principe.

Palizones, Laguna de; small lake near south coast of province of Santa Clara, in municipal district of Sancti Spiritus.

Palma; barrio in municipal district of Sabanilla, province of Matanzas.

Palma, Arroyo; left-hand branch of Rio Yaleras, province of Santiago.

Palma, Arroyo; small branch of Arroyo Ojo de Agua, in northern part of province of Santa Clara.

Palma, Arroyo; short left-hand branch of Rio Zaza, province of Santa Clara.

Palma, Arroyo la; stream in eastern part of municipal district of Ciego de Avila, province of Puerto Principe.

Palma, Cayo; islet off north coast of province of Puerto Principe.

Palma, Laguna la; lake near north coast in municipal district of Marti, province of Matanzas.

Palma, Rio de la; river in province of Matanzas, dividing it, for a distance of 10 miles from its source, from the province of Santa Clara. Length 33 miles.

Palma de San Juan; village in municipal district of Guantanamo, province of Santiago.

Palma de San Juan; barrio in municipal district of Guantanamo, province of Santiago. Population 231.

Palma Picada; barrio in municipal district of Ceiba del Agua, province of Habana.

Palmar; barrio in municipal district of Guantanamo, province of Santiago. Population 1,165.

Palmarito; village in northern part of municipal district of Puerto Padre, province of Santiago.

Palmarito; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,072.

Palmarito, Arroyo; right-hand branch of Duaba River, in Santiago province.

Palmas Altas Caridad; town near coast in municipal district of Manzanillo, province of Santiago.

Palmas, Arroyo; stream in western part of municipal district of Puerto Padre, Santiago province.

Palma Sola; village in municipal district of Ceja de Pablo, province of Santa Clara.

Palma Sola; barrio in municipal district of Ceja de Pablo, province of Santa Clara. Population 201.

Palma Soriano; municipal district in province of Santiago. Area 244 square miles. Population 12,305.

Palma Soriano; an interior city and barrio in municipal district of Palma Soriano, province of Santiago. Population 1,776.

Palmillas; municipal district in province of Matanzas. Area 422 square miles. Population 7,647.

Palmillas; town in municipal district of Palmillas, province of Matanzas.

Palmillas; barrio in municipal district of Palmillas, province of Matanzas. Population 954.

Palmillas, Punta; point on south coast of province of Santa Clara.

Palmira; municipal district in province of Santa Clara. Area 132 square miles. Population 6,527.

Palmira; an interior city of Santa Clara. Population 4,519.

Palmitas, Arroyo; small stream in municipal district of Puerto Padre, province of Santiago.

Palmitas, Arroyo; small stream flowing to south coast in municipal district of Cobre, province of Santiago.

Palo, Faralon del; hills in eastern part of municipal district of Baracoa, province of Santiago.

Palos; barrio in municipal district of Nueva Paz, province of Habana. Population 2,630.

Palos, Arroyo dos; small branch of Rio Contramaestre in municipal district of Jiguani, Santiago Province.

Palo Seco, Loma; hill near south coast in municipal district of Trinidad, province of Santa Clara.

Panade Azucar; hill on northern slope of Sierra Maestra, province of Santiago.

Pan de Matanzas; hill in western part of province of Matanzas.

Papayal, Arroyo; left-hand branch of Rio San Pedro, province of Puerto Principe.

Parroquia; barrio in municipal district of Guantanamo, province of Santiago. Population 1,540.

Parroquia; barrio in municipal district of Santa Clara, province of Santa Clara. Population 3,349.

Paradas, Arroyo; right-hand branch of Yarey River, in municipal district of Puerto Padre, Santiago Province.

Paradero; barrio in municipal district of San Fernando, province of Santa Clara. Population 1,573.

Paradero; barrio in municipal district of San Nicolas, province of Habana.

Paredes; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 578.

Paredes; village in municipal district of Sancti Spiritus, province of Santa Clara.

Pasage, Cayo; island north of province of Santa Clara.

Pasaje, Cayo del; islet north of province of Santa Clara.

Paso, Sierra de; mountains in western part of municipal district of Guantanamo, province of Santiago.

Pasobanco, Punta; point on south coast of Santa Clara, municipal district of Sancti Spiritus.

Paso Cabado; barrio in municipal district of Quemado de Guines, province of Santa Clara. Population 1,288.

Paso Presto, Punta; point on west coast of province of Santiago, municipal district of Bayamo.

Paso Real; village in municipal district of Calabazar, province of Santa Clara.

Paso Real; village in municipal district of Guane, province of Pinar del Rio.

Paso Real; barrio in municipal district of Calabazar, province of Santa Clara. Population 433.

Paso Real; barrio in municipal district of Guane, province of Pinar del Rio.

Pasos, Arroyo los; small stream in municipal district of Holguin, province of Santiago.

Paso Seco; barrio in municipal district of Matanzas, province of Matanzas.

Paso Viejo; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Paso Viejo; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 2,351.

Pastora; barrio in municipal district of Santa Clara, province of Santa Clara. Population 3,171.

Patanca, Cayo; small island south of province of Santa Clara.

Paula; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 2,066.

Pavia, Punta la; point on north coast of province of Santa Clara.

Paz de los Naranjos; barrio in municipal district of Caney, province of Santiago. Population 284.

Pedernales, Punta; point on west coast of Isla de Pinos.

Pedregalon, Arroyo; small branch of Rio Cauto in municipal district of Holguin, Santiago Province.

Pedregosa, Lomas; hills in municipal district of Trinidad, province of Santa Clara.

Pedro Barba; barrio in municipal district of Sancti Spiritus, province of Santa Clara.

Pelada, Arroyo de la; small right-hand branch of Rio Zaza, province of Santa Clara.

Pelada, Loma la; hill in municipal district of Mantua, province of Pinar del Rio.

Peladas, Lomas; hills in municipal district of Sancti Spiritus, province of Santa Clara.

Pena Blanca; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Pena Blanca, Loma; hill in municipal district of Pinar del Rio, province of Pinar del Rio.

Pena Brava; hill in municipal district of Manzanillo, province of Santiago.

Peñalver; village in Habana Province.

Pendejeras; village in northern part of province of Matanzas.

Pepe Antonio; barrio in municipal district of Guanabacoa, province of Habana.

Pequena, Sierra; mountains in northern part of Isla de Pinos.

Perdiz, Sierra de la; mountains in northern part of province of Pinar del Rio.

Pereguina, Lomas de; hills in Habana Province.

Pereira, Punta; point on north coast of Pinar del Rio.

Perejil, Rio; river in Habana Province, flowing to south-coast swamps.

Perico; municipal district in province of Matanzas. Area 44 square miles. Population 4,449.

Perico; an interior city of Matanzas. Population 2,436.

Perico, Norte; barrio in municipal district of Perico, province of Matanzas. Population 2,436.

Perico, Sur; barrio in municipal district of Perico, province of Matanzas. Population 324.

Perico, Viejo; village in municipal district of Perico, province of Matanzas.

Perpetua, Punta; point on south coast of San Antonio peninsula, province of Pinar del Rio.

Perrin, Arroyo; right-hand branch of Duaba River, in province of Santiago.

Perro, Estero del; inlet and creek on west coast of province of Puerto Principe.

Perro, Punta del; point on west coast of province of Puerto Principe.

Perros, Sierra de los; mountains on the north coast of province of Puerto Principe, in municipal district of Moron.

Peru; barrio in municipal district of Jaruco, province of Habana.

Pescadores, Punta; point on Cayo Sabinal, province of Puerto Principe.

Pesquera, Laguna; small lake in province of Puerto Principe, on boundary line between municipal districts of Ciego de Avila and Moron.

Pesquera Nueva, Punta; point on coast of municipal district of Gibara, province of Santiago.

Pesquero, Laguna del; lake near south coast of province of Puerto Principe and town of Guayabal.

Picado, Ensenada; small bay on west coast of province of Pinar del Rio.

Picapica, Laguna; small lake near south coast in municipal district of Los Palacios, province of Pinar del Rio.

Pichardo, Cayo; island north of province of Santa Clara.

Piedra, Laguna; lake in southern part of Isla de Pinos.

Piedra, Punta de; point on west coast of Isla de Pinos.

Piedra, Punta de; point on north coast of Isla de Pinos.

Piedra, Punta del; point on east coast of Isla de Pinos.

Piedras; village in municipal district of Las Vueltas, northern part of province of Santa Clara.

Piedras; village in municipal district of San Jose de los Ramos, province of Matanzas.

Piedras; barrio in municipal district of Bejucal, province of Habana. Population 1,670.

Piedras; barrio in municipal district of Bolondron, province of Matanzas.

Piedras; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 1,204.

Piedras, Arroyo; left-hand branch of Rio de las Chambas, in northern part of provinces of Puerto Principe and Santa Clara.

Piedras, Arroyo Las; stream flowing to north coast, in municipal district of Neuvitas, province of Puerto Principe.

Piedras, Arroyo; small branch of Arroyo del Lindero, in province of Puerto Principe.

Piedras, Arroyo; left-hand branch of Rio Contramaestra, in municipal district of Jiguani, province of Santiago. Length 20 miles.

Piedras, Arroyo; short left-hand branch of Guantanamo River, in municipal district of Guantanamo, province of Santiago.

Piedras, Arroyo; creek flowing to coast, in western part of province of Pinar del Rio.

Piedras, Arroyo de; small left-hand branch of Rio Cuyaguateje, in western part of province of Pinar del Rio.

Piedras, Cayo; islet off north coast of province of Santa Clara.

Piedras, Cayo de; islet north of province of Matanzas.

Piedras, Rio; left-hand branch of Rio de la Palma, in province of Matanzas.

Piedras, Punta de; point on south coast of province of Santa Clara.

Piedras, Punta de; point on south coast of province of Pinar del Rio.

Piedras, Punta de; point on south coast of San Antonio peninsula, province of Pinar del Rio.

Piedrecilas, Laguna; small lake in municipal district of Cienfuegos, southern part of province of Santa Clara.

Pijuan; village in municipal district of San Jose de los Ramos, province of Matanzas.

Pila, Arroya de la; right branch of Muñoz River, in province of Puerto Principe.

Pilon, Cayos del; islets south of province of Puerto Principe.

Pilota, Punta; point on north coast of province of Puerto Principe.

Pilotos; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio. Population 1,918.

Pimienta, Arroyo; short left-hand branch of Cauto River, in municipal district of Mayari, province of Santiago.

Pimiento, Laguna; small lake in municipal district of Guane, province of Pinar del Rio.

Pimpiniche, Punta; point on south coast of province of Puerto Principe.

Pinal, Cuchillas del; hills in municipal district of Sagua de Tanamo, province of Santiago.

Pinal Ciego, Punta; point on west coast of province of Pinar del Rio.

Pinal de Yaguas, Lomas; hills in municipal district of Guane, province of Pinar del Rio.

Pinar, Arroyo; right-hand branch of Duaba River in Santiago Province.

Pinar del Rio; the westernmost province of Cuba, comprising the entire breadth of the western portion of the island, with an area of 5,000 square miles. It is traversed by a mountain range, the Organ Mountains, running parallel to the coasts, a little north of the mid line between them. From the summit of this range the land slopes to the coast line on either side, and these slopes, especially the southern one, constitute the finest and richest tobacco lands of the island. The population of Pinar del Rio in 1899 was 173,064, the density of population being 35 to the square mile. The population is almost entirely rural. Males were in excess of females to the extent of 6 per cent. Native whites constituted 67 per cent, colored 27 per cent, and foreign-born 6 per cent of the inhabitants. It has the lowest literacy of all the provinces, persons able to read constituting only 19 per cent of the total population. The province is divided into 20 municipal districts.

Pinar del Rio; municipal district in province of Pinar del Rio. Area 361 square miles. Population 38,343.

Pinar del Rio; interior city and capital of the province of Pinar del Rio. Population 8,880.

Pinatillo, Punta del; point on west coast of province of Pinar del Rio.

Pinganillos, Punta; point on north coast of Habana Province.

Pinillos, Punta; point on west coast of province of Santiago, municipal district of Bayamo.

Pintado, Punta del; point on east coast of province of Santiago.

Piojo, Caleta; cove on south coast of San Antonio peninsula, province of Pinar del Rio.

Piojo, Ensenada; small bay on south coast of municipal district of Manzanillo, Santiago Province.

Pipian; municipal district in province of Habana. Area 66 square miles. Population 1,101.

Pipian; village in Habana Province.

Placetas; municipal district in province of Santa Clara. Area 226 square miles. Population 11,961.

Placetas; an interior city of Santa Clara Province. Population 5,409.

Placetas; barrio in municipal district of Placetas, province of Santa Clara.

Planazo, Punta del; point on south coast of province of Santa Clara.

Plata, Punta de la; point on north coast of province of Santiago.

Platanal; barrio in municipal district of Macuriges, province of Matanzas.

Platano; barrio in municipal district of Managua, province of Habana.

Platano, Arroyo; small right-hand branch of Rio San Pedro in municipal district of Puerto Principe, province of Puerto Principe.

Platano, Arroyo del; left-hand branch of Rio Caunao in municipal district of Puerto Principe, province of Puerto Principe.

Platano, Rio; left-hand branch of Rio Jaibo in municipal district of Sagua de Tanamo, province of Santiago.

Playa; barrio in municipal district of Marianao, province of Habana. Population 574.

Playa; barrio in municipal district of Mariel, province of Pinar del Rio.

Playa, Caleton de la; cove on south coast of province of Santiago.

Playa Bonita; barrio in municipal district of Santa Cruz del Sur, province of Puerto Principe.

Playa del Rincon; village in Habana Province.

Playa Larga, Punta; point on north coast of province of Santiago.

Playuelas; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,038.

Playuelas, Rio; right-hand branch of Rio Naranjo in municipal district of Puerto Padre, Santiago Province.

Playuelas, Cayo las; islet off north coast of province of Pinar del Rio.

Plaza; barrio in municipal district of Jaruco, province of Habana.

Pociblos, Punta los; point on west coast of San Antonio peninsula, province of Pinar del Rio.

Pocitas, Arroyo de las; right-hand branch of Rio Calabazar in municipal district of Sancti Spiritus, province of Santa Clara.

Pocito; barrio in municipal district of Marianao, province of Habana. Population 1,560.

Ponce, Loma de; hill in Habana Province.

Pontezuela, Arroyo; right-hand branch of Rio Caunao, province of Puerto Principe.

Porro, Loma del; hill in northern part of municipal district of Nuevitas, province of Santiago.

Portales; village on river of same name in municipal district of Guane, province of Pinar del Rio.

Portales; barrio in municipal district of Guane, province of Pinar del Rio.

Portales, Rio los; left-hand branch of Rio Cuyaguateje in western part of province of Pinar del Rio.

Portillo; town at mouth of river of same name on south coast of province of Santiago.

Portillo; barrio in municipal district of Manzanillo, province of Santiago. Population, 440.

Portillo, Cayo; islet north of province of Matanzas.

Portillo, Puerto; port on south coast of municipal district of Manzanillo, province of Santiago.

Portillo, Punta, Ensenada, and Rio; point, small harbor, and river on south coast of province of Santiago, in municipal district of Cobre.

Portillo, Punta; point on south coast of Manzanillo, province of Santiago.

Portillo, Rio; river flowing to south coast in Santiago Province.

Portillo, Sierra del; mountains in southern part of municipal district of Puerto Principe, province of Puerto Principe.

Portier, Rio; a river of Habana Province, flowing to north coast.

Potosi, Laguna; small lake in western part of municipal district of Puerto Padre, province of Santiago.

Potrenillo, Boca del; small bay on west coast of province of Puerto Principe.

Potrerillo; village in municipal district of Gibara, province of Santiago.

Potrerillo; village in municipal district of San Juan de las Yeras, province of Santa Clara.

Potrerillo; barrio in municipal district of Gibara, province of Santiago. Population 920.

Potrerillo; barrio in municipal district of San Juan de las Yeras, province of Santa Clara. Population 741.

Potrerillo; barrio and village in municipal district of Santo Domingo, province of Santa Clara.

Potrerillo, Pico; mountain peak in southern part of province of Santa Clara, municipal district of Trinidad.

Potrero, Punta del; point on east coast of Isla de Pinos.

Poveda; barrio in municipal district of Bejucal, province of Habana.

Poveda, Laguna; small lake in municipal district of San Luis, southern part of province of Pinar del Rio.

Pozas, Rio; river flowing to north coast in province of Pinar del Rio.

Pozo de la China; barrio in municipal district of Ranchuelo, province of Santa Clara. Population 1,101.

Practicos, Punta; point on north coast of Puerto Principe Province.

Primero de Martinez; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio.

Providencia, Cayo; islet south of Zapata peninsula, province of Santa Clara.

Provincial; barrio in municipal district of Santa Clara, province of Santa Clara. Population 1,195.

Pueblo Nuevo; village in municipal district of Candelaria, province of Pinar del Rio.

Pueblo Nuevo; town in province of Puerto Principe, near city of Puerto Principe.

Pueblo Nuevo; barrio in municipal district of Cardenas, province of Matanzas.

Pueblo Nuevo; barrio in municipal district of Cruces, province of Santa Clara. Population 818.

Pueblo Nuevo; barrio in municipal district of Gibara, province of Santiago. Population 826.

Pueblo Nuevo; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 1,655.

Pueblo Nuevo; barrio in municipal district of San Jose de los Ramos, province of Matanzas. Population 1,487.

Pueblo Nuevo; barrio in municipal district of Sancti Spiritus, province of Santa Clara.

Pueblo Nuevo; barrio in municipal district of Union de Reyes, province of Matanzas. Population 545.

Puente; barrio in municipal district of Jaruco, province of Habana.

Puente; barrio in municipal district of Santa Clara, province of Santa Clara. Population 2,594.

Puentes Grandes; city in province of Habana. Population 2,683.

Puentes Grandes; barrio in municipal district of Habana, province of Habana. Population 3,262.

Puercas, Ensenada Las; small bay on south coast of municipal district of Manzanillo, Santiago Province.

Puercos, Arroyo Los; left-hand branch of Rio de Guayabano in municipal district of Guantanamo, province of Santiago.

Puercos, Punta de Los; point on northeast coast of province of Santiago.

Puercos, Rio; river flowing to north coast in western part of province of Pinar del Rio.

Puerta, Punta de la; point on south coast of province of Santiago.

Puerta de la Guira; barrio in municipal district of Artemisa, province of Pinar del Rio. Population 498.

Puertala Guira; village in municipal district of Artemisa, province of Pinar del Rio.

Puerto Escondido; barrio in municipal district of Santo Domingo, province of Santa Clara. Population 741.

Puerto Padre; municipal district in province of Santiago. Area 1,215 square miles. Population 19,984.

Puerto Padre; a coast city in province of Santiago. Population 1,729.

Puerto Principe; a province of Cuba, situated toward the eastern part of the island, with an area of 10,500 square miles. The surface is rolling and toward the eastern part becomes hilly and broken. Much of it is composed of great plains or savannas, which are devoted to pasturage. The population was in 1899 88,234, being the smallest of the six provinces. The density of the population was only 8 to the square mile. Of the total population 28 per cent lived in towns of 8,000 inhabitants or more. Males were in excess of females to the extent of 2 per cent. As to race and nativity, three-fourths of the population were native whites, 5 per cent were foreign born, and 20 per cent were colored, the proportion of colored being smaller than in any other province. Of the total population 38 per cent were able to read, the percentage being greater than in any other province, with the exception of Habana. The province is divided into five municipal districts. Its capital is Puerto Principe.

Puerto Principe; municipal district in province of Puerto Principe. Area 4,630 square miles. Population 53,140.

Puerto Principe; an interior city and capital of province of Puerto Principe. Population 25,102.

Puerto Rico; barrio in municipal district of Candelaria, province of Pinar del Rio.

Puerto Rico, Arroyo; right-hand branch of Rio Cabreras, Santiago Province.

Puerto Rico, Punta del; point on east coast of municipal district of Gibara, province of Santiago.

Punta; barrio in municipal district of Bolondron, province of Matanzas.

Punta, Loma; hill in municipal district of Jiguani, in Santiago Province.

Punta, Lomas de Oro; hills in southern part of municipal district of Bayamo, Santiago Province.

Punta Alegre; barrio in municipal district of Moron, province of Puerto Principe. Population 495.

Punta Brava; village in Habana Province.

Punta Brava; barrio in municipal district of Bauta, province of Habana.

Punta Brava; barrio in municipal district of Macuriges, province of Matanzas. Population 1,508.

Punta de la Sierra; barrio in municipal district of Guane, province of Pinar del Rio.

Punta de Palmas; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Punta de Practicos; barrio in municipal district of Niquero, province of Santiago.

Purgatorio, Caleta del; cove on south coast of Isla de Pinos.

Purgatorio, Punta; point on west coast of municipal district of Niquero, Santiago province.

Purgatorio, Punta; point on north coast of province of Pinar del Rio.

Purial; village in municipal district of Guantanamo, province of Santiago.

Purial; barrio in municipal district of Esperanza, province of Santa Clara. Population 915.

Purial, Arroyo; right-hand branch of Jauco River in Santiago Province.

Purnio; village in municipal district of Holguin, province of Santiago.

Purnio; barrio in municipal district of Holguin, province of Santiago. Population 980.

Puto, Cayo; islet south of Cayo Romano.

Quebra Hacha; village in municipal district of Guanajay, northern part of province of Pinar del Rio.

Quemada Pinales; foothills of the Sierra Maestra, in Santiago province.

Quemado; town in municipal district of Santa Cruz del Sur, southern part of province of Puerto Principe.

Quemado; barrio in municipal district of Baracoa, province of Santiago. Population 363.

Quemado; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 805.

Quemado, Alto del; hills in municipal district of Mayari, province of Santiago.

Quemado, Loma; hills in municipal district of Guantanamo, province of Santiago.

Quemado, Punta del; point on east coast of province of Santiago.

Quemado de Guines; municipal district in province of Santa Clara. Area 167 square miles. Population 8,890.

Quemado de Guines; an interior city in province of Santa Clara. Population 1,562.

Quemado de Guines; barrio in municipal district of Quemado de Guines, province of Santa Clara. Population 3,082.

Quemado de Pinedo, Rio; left-hand branch of Rio Cuyaguateje, in western part of province of Pinar del Rio.

Quemado Grande, Arroyo; small right-hand branch of Rio Jobabo, in province of Puerto Principe.

Quemado Hilario; barrio in municipal district of San Juan de las Yeras, province of Santa Clara. Population 503.

Quemados; barrio in municipal district of Marianao, province of Habana. Population 3,177.

Quesigua, Rio; stream in northern part of municipal district of Baracoa, province of Santiago.

Quibican Rio; river in Habana Province, flowing to north coast.

Quibican, Surgidero; anchorage on south coast of province of Santiago, municipal district of Cobre.

Quibijan, Rio; right-hand branch of Barba River in Santiago Province.

Quiebra Hacha; barrio in municipal district of Mariel, province of Pinar del Rio.

Quimbambas, Lomas de las; hills in central part of province of Matanzas.

Quinta; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 1,422.

Quintana; village in municipal district of Guanajay, northern part of province of Pinar del Rio.

Quintana; village in municipal district of Roque, province of Matanzas.

Quintana; barrio in municipal district of Guayabal, province of Pinar del Rio. Population 562.

Quintana; barrio in municipal district of Roque, province of Matanzas.

Quintana; barrio in municipal district of San Antonio de los Baños, province of Habana. Population 705.

Quintinal; barrio in municipal district of Batabano, province of Habana.

Quitasol, Cayo; islet south of province of Santa Clara.

Quivican; municipal district in province of Habana. Area 65 square miles. Population 2,423.

Quivican; an interior city in province of Habana. Population 1800.

Quivican, Loma; hill in southern part of province of Santa Clara, municipal district of Cienfuegos.

Quivican, Rio de; river in Habana province, flowing to south coast.

Raisu, Arroyo; short left-hand branch of Toa River in Santiago Province.

Ramirez; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 680.

Ramon de las Yaguas; barrio in municipal district of Santiago de Cuba, province of Santiago. Population 2,388.

Ramos; village in municipal district of Alto Songo, province of Santiago.

Ramos; barrio in municipal district of Managua, province of Habana.

Ramos, Arroyo; stream in western part of municipal district of Puerto Padre, Santiago Province.

Rancho Boyero; village in Habana Province.

Rancho del Medio; village in northern part of province of Matanzas.

Rancho del Medio; barrio in municipal district of Maximo Gomez, province of Matanzas. Population 701.

Rancho Quemado, Punta de; point on west coast of Isla de Pinos.

Rancho Simon, Arroyo; branch of Rio Almendares, in Habana Province.

Rancho Veloz; municipal district in province of Santa Clara. Area 161 square miles. Population 7,532.

Rancho Veloz; a coast city in province of Santa Clara. Population 1,514.

Rancho Viejo, Lomas de; hills in Habana Province.

Rancho Viejo, Punta de; point on east coast of Isla de Pinos.

Ranchuelo; municipal district in province of Santa Clara. Area 40 square miles. Population 5,059.

Ranchuelo; an interior city in province of Santa Clara. Population 3,019.

Rangel, Sierra del; mountains in northern part of province of Pinar del Rio.

Rapado, Cayo; island west of province of Pinar del Rio.

Rapays, Laguna; small lake in southern part of province of Puerto Principe, municipal district of Santa Cruz del Sur.

Raspadura, Arroyo de la; small left-hand branch of Rio Toa in Santiago Province.

Rastro; barrio in municipal district of Guantanamo, province of Santiago. Population 831.

Ratones, Cayo; islet off north coast of Pinar del Rio.

Ratones, Cayo; islet off north coast of province of Santa Clara.

Rayo; barrio in municipal district of Mariel, province of Pinar del Rio.

Real, Ensenada el; small bay on south coast of municipal district of Niquero, Santiago Province.

Realengo; barrio in municipal district of Jovellanos, province of Matanzas. Population 363.

Recrea; village in northern part of province of Matanzas.

Redencion; barrio in municipal district of Nuevitas, province of Puerto Principe. Population 830.

Redonda, Caleta; cove on south coast of municipal district of Cienfuegos, province of Santa Clara.

Redonda, Laguna; small lake on south coast of province of Santa Clara, in municipal district of Sancti Spiritus.

Redonda, Laguna; lake in municipal district of Guane, southern part of province of Pinar del Rio.

Regidor, Loma del; hills in southern part of municipal district of Santa Clara, province of Santa Clara.

Regla; municipal district and city on Habana Harbor, opposite city of Habana, province of Habana. Population 11,363.

Regla, Arroyo; branch of Arroyo Zacatecas in northern part of province of Santa Clara.

Reloj; barrio in municipal district of Aguacate, province of Habana.

Reloj; barrio in municipal district of Bainoa, province of Habana.

Remanganaguas; village in municipal district of Palma Soriano, province of Santiago.

Remanganaguas; barrio in municipal district of Palma Soriano, province of Santiago. Population 1,688.

Remate; barrio and village in municipal district of San Juan de los Remedios, province of Santa Clara.

Remate, Estero del; inlet on west coast of province of Puerto Principe.

Remate, Rio del; left-hand branch of Rio Zaza, in northern part of province of Santa Clara.

Remates; village in municipal district of Guane, southern part of province of Pinar del Rio.

Remates; barrio in municipal district of Guane, province of Pinar del Rio. Population 3,014.

Remedios; city near north coast in province of Santa Clara. Population 6,633.

Resbalosa, Laguna; lake near south coast of province of Puerto Principe, in municipal district of Santa Cruz del Sur.

Retiro, Sierra del; mountains in municipal district of Mantua, western part of province of Pinar del Rio.

Ricaco, Punta del; point on east coast of province of Santiago.

Rico, Arroyo; short branch of Rio Contramaestra in municipal district of Cobre, province of Santiago.

Riecito, Arroyo; right-hand branch of Rio Tana, in province of Puerto Principe.

Rincon; village in Habana Province.

Rincon; barrio in municipal district of Santiago de las Vegas, province of Habana.

Rincon, Caleta del; cove on south coast of municipal district of Niquero, Santiago Province.

Rinconada; village in municipal district of Jiguani, province of Santiago.

Rinconada; barrio in municipal district of Jiguani, province of Santiago. Population 1,012.

Rincon de la Palma; village in municipal district of Holguin, Santiago Province.

Rincon de Sevilla, Surgidero del; anchorage on south coast of municipal district of Cobre, province of Santiago.

Rincon Grande, Punta de; point on north coast of municipal district of Puerto Principe, province of Puerto Principe.

Rio; barrio in municipal district of Santo Domingo, province of Santa Clara.

Rio Abajo, Arroyo; left branch of Rio Caunao in municipal district of Puerto Principe, province of Puerto Principe.

Rio Blanco; village near coast in municipal district of Consolacion del Norte, province of Pinar del Rio.

Rio Blanco; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio.

Rio Blanco; barrio in municipal district of Macuriges, province of Matanzas. Population 1,577.

Rio de Ay; village on river of same name in municipal district of Trinidad, province of Santa Clara.

Rio de Ay; barrio in municipal district of Trinidad, province of Santa Clara. Population 2,417.

Rio de Puercos; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio.

Rio Feo; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Rio Feo; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 1,034.

Rio Frio; barrio in municipal district of Cobre, province of Santiago. Population 605.

Rio Hondo; barrio and village in municipal district of Candelaria, province of Pinar del Rio.

Rio Hondo; barrio and village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Rio Hondo; barrio and village in municipal district of San Cristobal, province of Pinar del Rio.

Rioja, Rio la; right-hand branch of Rio Salado, in municipal district of Holguin, Santiago Province.

Rio Seco; village in municipal district of Guantanamo, province of Santiago.

Rio Seco; village in municipal district of San Luis, province of Pinar del Rio.

Rio Seco; barrio in municipal district of Guantanamo, province of Santiago. Population 1,334.

Rio Seco; barrio in municipal district of San Luis, province of Pinar del Rio. Population 760.

Rio Seco; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio. Population 1,920.

Rio Seco, Punta; point on south coast of province of Santiago.

Rio Seco, Surgidero; anchorage on south coast of province of Santiago.

Rio Sequito; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Rio Sequito; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 4,278.

Rios, Surgidero de Dos; anchorage on coast of municipal district of Cobre, southern part of province of Santiago.

Roblar; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Roblar, Rio; river flowing to south coast in province of Pinar del Rio.

Roble, Arroyo; short left-hand branch of Rio de las Caravelas in province of Puerto Principe.

Robles; village in municipal district of Cardenas, northern part of province of Matanzas.

Robles, Arroyo; stream in province of Puerto Principe, flowing to north coast.

Rodas; municipal district in province of Santa Clara. Area 153 square miles. Population 9,562.

Rodas; an interior city in province of Santa Clara. Population 3,390.

Rodrigo; village in municipal district of Santo Domingo, province of Santa Clara.

Rodrigo; barrio in municipal district of Santo Domingo, province of Santa Clara. Population 583.

Romano, Cayo; large island north of municipal district of Puerto Principe, province of Puerto Principe.

Romero, Cayo; islet north of province of Matanzas.

Rompe, Lomas de; hills in western part of municipal district of Puerto Padre, province of Santiago.

Roque; municipal district in province of Matanzas. Area 126 square miles. Population 4,464.

Roque; barrio and city in municipal district of Roque, province of Matanzas. Population 1,482.

Roques, Punta de los; point on north coast of Habana Province.

Rosa, Loma de la; hill in southern part ot province of Santa Clara, municipal district of Sancti Spiritus.

Rosario; barrio in municipal district of Viñales, province of Pinar del Rio. Population 2,061.

Rosario, Caleta; small bay on south coast of province of Santa Clara.

Rosario, Rio; right-hand branch of Rio Santo Domingo, in province of Matanzas.

Rosario, Rio del; river flowing to north coast in western part of province of Pinar del Rio.

Rosita, Punta; point on north coast of province of Santiago.

Rubio; barrio in municipal district of Guines, province of Habana.

Ruta, Rio; small river on north coast of municipal district of Sagua de Tanamo, province of Santiago.

Ruvira; barrio in municipal district of Jaguey Grande, province of Matanzas. Population 827.

Sabalo; village and barrio in municipal district of Guane, province of Pinar del Rio.

Sabana; village in northeastern part of municipal district of Baracoa, province of Santiago.

Sabana; barrio in municipal district of Baracoa, province of Santiago. Population 654.

Sabana; barrio in municipal district of Camajuani, province of Santa Clara. Poplation 1,621.

Sabana de Robles; barrio in municipal district of Madruga, province of Habana.

Sabana Grande; village in municipal district of Ceja de Pablo, province of Santa Clara.

Sabana Grande; barrio in municipal district of Ceja de Pablo, province of Santa Clara. Population 1,190.

Sabanalamar, Estero and Laguna; inlet and small lake on south coast of province of Puerto Principe.

Sabanalamar, Rio; river dividing municipal districts of Baracoa and Guantanamo, province of Santiago, for 22 miles from southern coast.

Sabanalamar, Punta; point on south coast of province of Santiago.

Sabana Nueva, Laguna; small lake in northern part of province of Puerto Principe, municipal district of Puerto Principe.

Sabana Robles; village in Habana Province.

Sabanas Nuevas, Lomas de; hills in northern part of province of Santa Clara.

Sabaneton, Punta; point on north coast of Habana Province.

Sabanilla; municipal district in province of Matanzas. Area 77 square miles. Population 5,205.

Sabanilla; an interior city in province of Matanzas. Population 2,200.

Sabanilla; village in municipal district of Alto Songo, province of Santiago.

Sabanilla; barrio in municipal district of Baracoa, province of Santiago. Population 780.

Sabanilla; barrio in municipal district of Maximo Gomez, province of Matanzas. Population 277.

Sabanilla; barrio in municipal district of Mayari, province of Santiago. Population 177.

Sabanilla; barrio in municipal district of Sabanilla, province of Matanzas. Population 3,781.

Sabanilla, Punta; point on south coast of province of Santa Clara.

Sabanilla, Rio; left-hand branch of Guantanamo River in province of Santiago.

Sabanilla, Rio; river in northern part of municipal district of Baracoa, province of Santiago.

Sabicu, Loma del; hill in municipal district of Pinar del Rio, province of Pinar del Rio.

Sabinal; barrio in municipal district of Nuevitas, province of Puerto Principe. Population 107.

Sabinal, Cayo; large island north of municipal district of Nuevitas, province of Puerto Principe.

Sabinal, Punta; point on Cayo Sabinal, province of Puerto Principe.

Sacramento, Lomas del; hills in Habana Province.

Sagra, Cayo la; islet north of province of Santa Clara.

Sagua; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Sagua, Rio; river in municipal district of Sagua de Tanamo, province of Santiago, flowing to north coast.

Sagua de Tanamo; municipal district in province of Santiago. Area 628 square miles. Population 5,796.

Sagua de Tanamo; city near north coast in province of Santiago, on Rio Sagua. Population 1,252.

Sagua de Tanamo, Surgidero; anchorage on north coast of municipal district of Sagua de Tanamo, province of Santiago.

Sagua la Chica; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara.

Sagua la Chica, Rio; river in province of Santa Clara. Heads in hills in municipal district of Placetas and flows north to sea. Length 45 miles.

Sagua la Grande; municipal district in province of Santa Clara. Area 205 square miles. Population 21,342.

Sagua la Grande; city situated near coast, on river of same name, in province of Santa Clara. Population 12,728.

Sagua la Grande, Rio; important river in province of Santa Clara. Heads in Sierra de Escambray and flows to north coast. Length 73 miles.

Sal, Cayos de la; group of small islands south of province of Santa Clara.

Salado; barrio in municipal district of Santa Isabel de las Lajas, province of Santa Clara.

Salado, Arroyo; right-hand branch of Bio River in Mayari municipal district, province of Santiago.

Salado, Arroyo; right branch of Arroyo las Lagunas in municipal district of Puerto Padre, province of Santiago.

Salado, Arroyo; small stream in western part of municipal district of Ciego de Avila, province of Puerto Principe.

Salado, Arroyo; right-hand branch of Rio Zaza, in southern part of province of Santa Clara.

Salado, Arroyo; stream in municipal district of Manzanillo, province of Santiago.

Salado, Rio; river flowing into Cienfuegos Bay on south coast of province of Santa Clara.

Salado, Rio; river flowing to west coast in province of Pinar del Rio.

Salado, Rio; an important tributary to the Cauto River, in northern part of Santiago Province. Length 35 miles.

Salamanca; village in municipal district of Camajuani, province of Santa Clara.

Salamanca; barrio in municipal district of Camajuani, province of Santa Clara. Population 1,704.

Sales; village near north coast in province of Matanzas.

Salina, Laguna; lake in San Antonio peninsula, western part of province of Pinar del Rio.

Salinas, Cayo de; island off north coast of province of Santa Clara.

Salinas, Loma; hill on north coast of municipal district of Puerto Padre, province of Santiago.

Salinas, Punta; point on south coast of province of Pinar del Rio.

Salinas, Puntas; points on north coast of Isla de Pinos.

Salinas, Punta de; point on north coast of province of Puerto Principe.

Saltadero, Arroyo; creek in northern part of municipal district of Sagua de Tanamo, province of Santiago.

Salto; village in municipal district of Santa Isabel de las Lajas, province of Santa Clara.

Salto; barrio in municipal district of Santa Isabel de las Lajas, province of Santa Clara. Population 1,199.

Salud; municipal district in province of Habana. Area 43 square miles. Population 3,293.

Sama; village on north coast of Santiago Province, municipal district of Gibara.

Sama; barrio in municipal district of Gibara, province of Santiago. Population 1,606.

Sama, Punta; point on coast of municipal district of Gibara, province of Santiago.

Sama, Rio; small river and harbor on north coast of province of Santiago, municipal district of Gibara.

Samaraguacon, Rio; river in province of Puerto Principe flowing northeast to coast. Length 45 miles.

Sanabria, Huevas de; hills in Habana Province.

Sanama, Punta; point on north coast of province of Santiago.

San Andres; village in municipal district of Holguin, province of Santiago.

San Andres; village in municipal district of Sabanilla, province of Matanzas.

San Andres; barrio in municipal district of Alquizar, province of Habana. Population 293.

San Andres; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio. Population 671.

San Andres; barrio in municipal district of Holguin, province of Santiago. Population 1,181.

San Andres; barrio in municipal district of Placetas, province of Santa Clara.

San Andres; barrio in municipal district of Sancti Spiritus, province of Santa Clara.

San Andres; barrio in municipal district of Tapaste, province of Habana.

San Andres, Lomas de; hills in Habana Province.

San Anton, Rio; river flowing to north coast in province of Matanzas.

San Anton, Rio; left-hand branch of Rio Yaleras, municipal district of Guantanamo, province of Santiago. Length 15 miles.

San Anton de la Anegada; village in northern part of province of Matanzas.

San Antonio; village in municipal district of Guantanamo, province of Santiago.

San Antonio; barrio in municipal district of Santa Maria del Rosario, province of Habana.

San Antonio, Arroyo; stream flowing to north coast in municipal district of Nuevitas, province of Puerto Principe.

San Antonio, Cabo; cape at western extremity of San Antonio Peninsula, province of Pinar del Rio.

San Antonio, Peninsula; western extension of province of Pinar del Rio.

San Antonio, Rio; river in Habana Province, flowing to south coast.

San Antonio de las Vegas; municipal district in province of Habana. Area 42 square miles. Population 1,855.

San Antonio de las Vegas; village in Habana Province.

San Antonio de las Vueltas; municipal district in province of Santa Clara. Area 208 square miles. Population 12,832.

San Antonio de las Vueltas; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 1,336.

San Antonio de los Baños; municipal district in province of Habana. Area 30 square miles. Population 12,631.

San Antonio de los Baños; an interior city in province of Habana. Population 8,178.

San Antonio de Rio Blanco; village in Habana Province.

San Antonio de Rio Blanco del Norte; barrio in municipal district of Santa Cruz del Norte, province of Habana. Population 965.

San Augustin; town in western part of municipal district of Holguin, province of Santiago.

San Augustin; barrio in municipal district of Batabano, province of Habana.

San Augustin; barrio in municipal district of Holguin, province of Santiago. Population 2,163.

San Augustin, Arroyo; left-hand branch of Rio Caunao, in municipal district of Puerto Principe, province of Puerto Principe.

San Augustin, Arroyo; right-hand branch of Rio Cabreras, in municipal district of Puerto Padre, Santiago Province.

San Bartolome; village and barrio in municipal district of Santo Domingo, province of Santa Clara.

San Bartolome; village in municipal district of Jiguani, Santiago Province.

San Blas; village in municipal district of San Diego de Nuñez, province of Pinar del Rio.

San Blas; barrio in municipal district of Madruga, province of Habana.

San Blas, Laguna; lake in municipal district of Marti, province of Matanzas.

San Cayetano; village in municipal district of Viñales, province of Pinar del Rio.

San Cayetano; barrio in municipal district of Viñales, province of Pinar del Rio. Population 2,920.

San Cristobal; municipal district in province of Pinar del Rio. Area 235 square miles. Population 4,263.

San Cristobal; town in municipal district of same name in province of Pinar del Rio.

San Cristobal; barrio in municipal district of San Cristobal, province of Pinar del Rio. Population 1,996.

San Diego, Rio; river in northern part of province of Pinar del Rio, flowing into Bahia Honda.

San Diego de los Baños; municipal district in province of Pinar del Rio. Area 202 square miles. Population 2,419.

San Diego de los Baños; village in municipal district of same name in province of Pinar del Rio.

San Diego del Valle; municipal district in province of Santa Clara. Area 95 square miles. Population 5,369.

San Diego de Nuñez; municipal district in province of Pinar del Rio. Area 138 square miles. Population 1,137.

San Diego de Nuñez; village in municipal district of same name in province of Pinar del Rio.

San Felipe; municipal district in province of Habana. Area 18 square miles. Population 1,915.

San Felipe; city in province of Habana. Population 1,450.

San Felipe, Loma de; hills in northern part of municipal district of Puerto Principe, province of Puerto Principe.

San Felipe, Rio; river in province of Pinar del Rio. Heads in Sierra de los Organos and flows to south coast in municipal district of Consolacion del Sur. Length 35 miles.

San Felipe, Rio; river flowing to south coast in province of Pinar del Rio, through municipal districts of Pinar del Rio and San Luis.

San Felipe, Rio; branch of Quivican River in Habana Province.

San Fernando; municipal district in province of Santa Clara. Area 67 square miles. Population 6,445.

San Fernando; an interior city in province of Santa Clara. Population 1,078.

San Fernando; village in municipal district of Holguin, Santiago Province.

San Fernando, Laguna; lake in municipal district of Guane, southern part of province of Pinar del Rio.

San Francisco; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

San Francisco; village in municipal district of Trinidad, province of Santa Clara.

San Francisco; barrio in municipal district of Guanajay, province of Pinar del Rio. Population 626.

San Francisco; barrio in municipal district of Matanzas, province of Matanzas. Population 234.

San Francisco; barrio in municipal district of Trinidad, province of Santa Clara. Population 546.

San Francisco, Arroyo; small branch of Rio Jaruco, in Habana Province

San Francisco de Paula; village in Habana Province.

San Francisco de Paula; village in municipal district of Matanzas, province of Matanzas.

San Gabriel; village near south coast, in municipal district of Julian Diaz, province of Pinar del Rio.

San Geronimo; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 986.

San Gil; village in municipal district of Santa Clara, province of Santa Clara.

San Gil; barrio in municipal district of Santa Clara, province of Santa Clara. Population 3,411.

San Gregorio; barrio in municipal district of Mayari, province of Santiago. Population 1,821.

San Jose; village in municipal district of Pinar del Rio, province of Pinar del Rio.

San Jose; barrio in municipal district of Esperanza, province of Santa Clara. Population 976.

San Jose; barrio in municipal district of Guanajay, province of Pinar del Rio. Population 389.

San Jose; barrio in municipal district of Jovellanos, province of Matanzas. Population, 2,018.

San Jose; barrio in municipal district of Mantua, province of Pinar del Rio.

San Jose; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 2,512.

San Jose, Arroyo; stream in northern part of municipal district of Nuevitas, province of Puerto Principe.

San Jose, Rio; tributary to Quivican River, in Habana Province.

San Jose, Sierra de; mountains in western part of Isla de Pinos.

San Jose de las Lajas; municipal district in province of Habana. Area 56 square miles. Population 4,154.

San Jose de las Lajas; an interior city of Habana. Population 3,024.

San Jose de los Ramos; municipal district in province of Matanzas. Area 146 square miles. Population 6,765.

San Jose de los Ramos; an interior city of Matanzas. Population 2,310.

San Juan; barrio in municipal district of Bayamo, province of Santiago. Population 1,234.

San Juan; barrio in municipal district of Sagua la Grande, province of Santa Clara. Population 769.

San Juan; barrio in municipal district of San Juan de las Yeras, province of Santa Clara. Population 2,401.

San Juan; barrio in municipal district of Santo Domingo, province of Santa Clara. Population 521.

San Juan, Cerros de; hills in eastern part of Isla de Pinos.

San Juan, Punta de; point on north coast of province of Puerto Principe.

San Juan, Punta de; point on south coast of province of Puerto Principe.

San Juan, Punta de; point on Peninsula de la Torre, north coast of province of Santiago.

San Juan, Rio; tributary to Quivican River, in Habana Province.

San Juan, Rio; river flowing to south coast of province of Santa Clara.

San Juan, Rio; river flowing to north coast, in province of Matanzas.

San Juan Bautista; village in northern part of province of Pinar del Rio.

San Juan Bautista; barrio in municipal district of Mariel, province of Pinar del Rio.

San Juan de Barracones; barrio in municipal district of Candelaria, province of Pinar del Rio.

San Juan de Dios; barrio in municipal district of Santa Cruz del Norte, province of Habana.

San Juan de las Yeras; municipal district in province of Santa Clara. Area 115 square miles. Population 5,600.

San Juan de las Yeras; an interior city in province of Santa Clara. Population 1,469.

San Juan del Norte; barrio in municipal district of Candelaria, province of Pinar del Rio.

San Juan de los Remedios; municipal district in province of Santa Clara. Area 158 square miles. Population 14,833.

San Juan y Martinez; municipal district in province of Pinar del Rio. Area 154 square miles. Population 14,787.

San Juan y Martinez; village in municipal district of same name, near southern coast, province of Pinar del Rio.

San Juan y Martinez; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio. Population 2,970.

San Juan y Martinez, Rio; river flowing to south coast in western part of province of Pinar del Rio.

San Julian; barrio in municipal district of Guines, province of Habana.

San Leandro; village in municipal district of Palma Soriano, province of Santiago.

San Leandro; barrio in municipal district of Palma Soriano, province of Santiago. Population 1,003.

San Lorenzo; village in municipal district of Holguin, province of Santiago.

San Lorenzo; barrio in municipal district of Holguin, province of Santiago. Population 1,060.

San Lorenzo; barrio in municipal district of Santà Cruz del Norte, province of Habana.

San Lorenzo, Laguna de; lake in southern part of municipal district of Holguin, province of Santiago.

San Luis; municipal district in province of Pinar del Rio. Area 154 square miles. Population 7,608.

San Luis; municipal district in province of Santiago. Area 68 square miles. Population 11,681.

San Luis; an interior city in province of Santiago. Population 5,059.

San Luis; barrio in municipal district of San Luis, province of Pinar del Rio. Population 3,553.

San Manuel; village in northeastern part of municipal district of Puerto Padre, province of Santiago.

San Manuel; barrio in municipal district of Puerto Padre, province of Santiago. Population 2,783.

San Marcos; village in municipal district of Santo Domingo, province of Santa Clara.

San Marcos; barrio in municipal district of Santo Domingo, province of Santa Clara.

San Marcos, Lomas de; hills in Habana Province.

San Marcos, Rio; river flowing to north coast in western part of province of Pinar del Rio.

San Matias; village in Habana Province.

San Matias; barrio in municipal district of Santa Cruz del Norte, province of Habana.

San Miguel; village in municipal district of Cabañas, province of Pinar del Rio.

San Miguel; village in municipal district of Guamacaro, province of Matanzas.

San Miguel; barrio and village in municipal district of Bahia Honda, province of Pinar del Rio.

San Miguel; barrio in municipal district of Cabañas, province of Pinar del Rio.

San Miguel; barrio in municipal district of Guamacaro, province of Habana. Population 374.

San Miguel; barrio in municipal district of Nuevitas, province of Puerto Principe. Population 716.

San Miguel, Rio; river flowing to north coast, in province of Pinar del Rio.

San Miguel, Rio; branch of Rio Jaruco, in Habana Province.

San Miguel del Padron; village in Habana Province.

San Miguel del Padron; barrio in municipal district of Guanabacoa, province of Habana.

San Nicolas; village in Habana Province.

San Nicolas; municipal district in province of Habana. Area 105 square miles. Population 4,568.

San Nicolas; barrio in municipal district of Ciego de Avila, province of Puerto Principe. Population 493.

San Nicolas; barrio in municipal district of San Nicolas, province of Habana.

San Nicolas, Rio; river in Habana Province flowing to south coast.

San Pablo; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio.

San Pedro; village near south coast, in municipal district of Trinidad, province of Santa Clara.

San Pedro, Arroyo; stream uniting with Rio Tajacon to form Tacajo River in Santiago Province.

San Pedro, Arroyo; stream in western part of municipal district of Puerto Padre, province of Santiago.

San Pedro; barrio in municipal district of Bauta, province of Habana.

San Pedro; barrio in municipal district of Guines, province of Habana.

San Pedro; barrio in municipal district of Santa Cruz del Sur, province of Puerto Principe. Population 240.

San Pedro; barrio in municipal district of Ste. Marie del Rosario, province of Habana. Population 1,285.

San Pedro; barrio in municipal district of Trinidad, province of Santa Clara. Population 892.

San Pedro, Cerro de; hill in central part of Isla de Pinos.

San Pedro, Rio; river in province of Puerto Principe, municipal district of Puerto Principe, flowing to south coast. Length 60 miles.

San Pedro, Rio de; river flowing to west coast in Isla de Pinos.

San Pedro de Cacocum; barrio in municipal district of Holguin, province of Santiago. Population 1,323.

San Pedro de Maniabon; village in municipal district of Holguin, province of Santiago.

San Pedro Mayabon; village in eastern part of province of Matanzas.

San Rafael, Lomas de; hills in Habana Province.

San Ramon; barrio in municipal district of Cabañas, province of Pinar del Rio.

San Ramon; barrio in municipal district of Campechuela, province of Santiago. Population 1,966.

San Sebastian, Cuchillas de; ridge in municipal district of Mantua, province of Pinar del Rio.

San Sebastian, Rio; river flowing to south coast in western part of province of Pinar del Rio.

San Tomas; barrio in municipal district of Viñales, province of Pinar del Rio. Population 1,570.

San Valentin; barrio in municipal district of Quemado de Guines, province of Santa Clara. Population 343.

San Vincente; village in municipal district of Esperanza, province of Santa Clara.

San Vincente; barrio in municipal district of Esperanza, province of Santa Clara. Population 1,138.

San Vincente; barrio in municipal district of Viñales, province of Pinar del Rio. Population 1,937.

Sanches, Arroyo; stream in northern part of Ciego de Avila, province of Puerto Principe.

Sancti Spiritus; municipal district in province of Santa Clara. Area 1,262 square miles. Population 25,709.

Sancti Spiritus; interior city in province of Santa Clara. Population 12,696.

Sandoval; town in municipal district of Moron, province of Puerto Principe.

Sandoval; barrio in municipal district of Moron, province of Puerto Principe. Population 1,028.

Santa Ana; municipal district in province of Matanzas. Area 60 square miles. Population 2,965.

Santa Ana; an interior city in province of Matanzas. Population 1,421.

Santa Ana; barrio in municipal district of Guanajay, province of Pinar del Rio. Population 765.

Santa Ana, Arroyo; right-hand branch of Rio Jababo, in province of Puerto Principe.

Santa Ana, Arroyo; small left-hand branch of Rio Sevilla in Puerto Principe Province.

Santa Ana, Lomas de; hills in Habana Province.

Santa Ana, Lomas de; hills in municipal district of Mantua, province of Pinar del Rio.

Santa Ana de Pastora; village in municipal district of Mantua, province of Pinar del Rio.

Santa Barbara; barrio in municipal district of Bejucal, province of Habana.

Santa Barbara; barrio in municipal district of Jaruco, province of Habana.

Santa Barbara; barrio in municipal district of Tapaste, province of Habana.

Santa Barbara, Rio; branch of Quivican River in Habana Province.

Santa Barbara, Rio; right-hand branch of Rio Hanabana, province of Matanzas.

Santa Brigida, Montes de; hills in Habana Province.

Santa Catalina, Arroyo; right-hand branch of Rio de las Caravelas, province of Puerto Principe.

Santa Catalina, Cuchillas; hills in western part of municipal district of Baracoa, province of Santiago.

Santa Clara; a province of Cuba, occupying the central part of the island, stretching from the north to the south coast, with an area of 9,560 square miles. The surface is, in the main, rolling and undulating, with some broken hills in the southeastern part. The population in 1899 was 356,536, the density of population being 37 to the square mile. The urban population comprises 23 per cent of the total population. Males are in excess of females to the extent of 6 per cent. The population was distributed as to race and nativity in the proportion of 60 per cent native whites, 10 per cent foreign born, and 30 per cent colored. Of the total population, one-third were unable to read. The province is divided into 28 municipal districts. The capital and chief city is Santa Clara, in the central portion of the province.

Santa Clara; municipal district in province of Santa Clara. Area 540 square miles. Population 28,437.

Santa Clara; an interior city and capital of the province of Santa Clara. Often known as Villa Clara. Population 13,763.

Santa Clara; village in municipal district of Consolacion del Sur, province of Pinar del Rio.

Santa Clara; village in municipal district of Holguin, province of Santiago.

Santa Clara; barrio in municipal district of Consolacion del Sur, province of Pinar del Rio. Population 645.

Santa Clara, Bahia; bay on north coast of province of Santa Clara.

Santa Clarita; village in municipal district of Camajuani, province of Santa Clara.

Santa Clarita; barrio in municipal district of Camajuani, province of Santa Clara. Population 1,501.

Santa Cruz; village in municipal district of Guantanamo, province of Santiago.

Santa Cruz; barrio in municipal district of Bainoa, province of Habana.

Santa Cruz, Arroyo: right-hand branch of Rio de las Caravelas, in province of Puerto Principe.

Santa Cruz, Rio; river in Habana province, flowing to north coast.

Santa Cruz del Norte; municipal district in province of Habana. Area 81 square miles. Population 2,965.

Santa Cruz del Norte; barrio in municipal district of Santa Cruz del Norte, province of Habana. Population 934.

Santa Cruz del Sur; municipal district in province of Puerto Principe. Area 1,162 square miles. Population 5,308.

Santa Cruz del Sur; a coast city in province of Puerto Principe. Population 1,210.

Santa Cruz de Los Pinos; village in municipal district of San Cristobal, province of Pinar del Rio.

Santa Cruz de Los Pinos; barrio in municipal district of San Cristobal, province of Pinar del Rio. Population 1,357.

Santa Fe; city in Isla de Pinos, province of Habana. Population 1,050.

Santa Fe; village in eastern part of Isla de Pinos.

Santa Fe; village in municipal district of Ceja de Pablo, province of Santa Clara.

Santa Fe; barrio in municipal district of Isla de Pinos, province of Habana. Population 1,050.

Santa Fe; barrio in municipal district of Rancho Veloz, province of Santa Clara. Population 2,982.

Santa Fe; barrio in municipal district of Viñales, province of Pinar del Rio. Population 657.

Santa Fe, Lomas de; hills in Habana Province.

Santa Fe, Lomas de; hills in northern part of province of Santa Clara.

Santa Fe, Rio de; river flowing to east coast in Isla de Pinos. Length 10 miles.

Santa Filomena; barrio in municipal district of Palma Soriano, province of Santiago. Population 682.

Santa Gertrudis; town in northern part of province of Puerto Principe, municipal district of Moron.

Santa Gertrudis; barrio in municipal district of Moron, province of Puerto Principe. Population 752.

Santa Isabel; village in municipal district of Mantua, province of Pinar del Rio.

Santa Isabel; barrio in municipal district of Mantua, province of Pinar del Rio.

Santa Isabel, Arroyo; right-hand branch of Rio Caunao, in municipal district of Puerto Principe, province of Puerto Principe.

Santa Isabel, Ensenada; small bay on west coast of province of Pinar del Rio.

Santa Isabel, Lomas de; hills near coast in municipal district of Mantua, province of Pinar del Rio.

Santa Isabel, Rio; river flowing to west coast in province of Pinar del Rio.

Santa Isabel, de las Lajas; an interior city in province of Santa Clara. Population 3,042.

Santa Lucia; barrio in municipal district of Gibara, province of Santiago. Population 3,436.

Santa Lucia; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 554.

Santa Lucia, Arroyo; small branch of Arroyo Pablo in municipal district of Moron, province of Puerto Principe.

Santa Lucia, Ensenada; small bay on northwest coast of province of Pinar del Rio.

Santa Lucia, Rio; river flowing to north coast in western part of province of Pinar del Rio.

Santa Lucia, Rio; small river flowing to west coast in province of Pinar del Rio.

Santa Lucia, Punta; point on northwest coast of province of Pinar del Rio.

Santa Maria; village in municipal district of Holguin, province of Santiago.

Santa Maria; village in municipal district of Mantua, province of Pinar del Rio.

Santa Maria; barrio in municipal district of Mantua, province of Pinar del Rio.

Santa Maria, Arroyo; small stream flowing to north coast in municipal district of Holguin, Santiago Province.

Santa Maria, Rio; left-hand branch of Rio Yeguas in province of Puerto Principe.

Santa Maria, Cayo; islet off west coast of province of Puerto Principe.

Santa Maria, Montes de; mountains in municipal district of Alto Songo, province of Santiago.

Santa Maria del Rosario; municipal district in province of Habana. Area 27 square miles. Population 2,730.

Santa Maria del Rosario; barrio in municipal district of Santa Maria del Rosario, province of Habana.

Santa Monica; village in municipal district of same name, province of Pinar del Rio.

Santa Monica; barrio in municipal district of Julian Diaz, province of Pinar del Rio.

Santa Rita; village in municipal district of Cobre, province of Santiago.

Santa Rita; barrio in municipal district of Cobre, province of Santiago. Population 514.

Santa Rita; barrio in municipal district of Jiguani, province of Santiago. Population 839.

Santa Rita, Montes de; hills in Habana Province.

Santa Rosa; barrio in municipal district of San Antonio de los Baños, province of Habana. Population 457.

Santa Rosa; barrio in municipal district of Santa Isabel de las Lajas, province of Santa Clara.

Santa Rosa, Arroyo; stream flowing to north coast in province of Santa Clara, municipal district of Yaguajay.

Santa Rosa, Rio; river flowing to coast in western part of province of Pinar del Rio.

Santa Rosa de Aguacate; village in Habana Province.

Santa Rosalia; village and wharf on north coast of municipal district of Gibara, province of Santiago.

Santa Rosalia; barrio in municipal district of Gibara, province of Santiago. Population 873.

Santa Teresa; barrio in municipal district of Guane, province of Pinar del Rio.

Santa Teresa, Loma de; hills on south coast of province of Santa Clara, municipal district of Cienfuegos.

Santiago; the easternmost and largest of the provinces of Cuba, having an area of 12,468 square miles. The surface is mountainous or hilly, in this respect presenting a sharp contrast to the portions of the island farther west. For a considerable distance the south coast is bordered by a high range of mountains—Sierra Maestra—one peak of which, Turquino, has an altitude reported to be in excess of 8,000 feet, with many other summits exceeding 5,000 feet. The interior of the province consists of a highly dissected table-land, ranging in altitude from 1,000 to 2,000 feet above sea level. This plateau is separated from the southern range, Sierra Maestra, by the broad and fertile valley of the Rio Cauto, the largest river in the island. The population of Santiago is 327,715, and the number of inhabitants to the square mile 26. Of the total population 18 per cent live in towns and cities exceeding 8,000 inhabitants each. The sexes are nearly equal in number. As to race and nativity, 51 per cent, or a trifle more than one-half, are native whites, and 4 per cent are of foreign birth; 45 per cent are colored, the proportion of colored being greater than in any other province. Of the total population only 27 per cent were able to read, the proportion being smaller than in any other province, with the exception of Pinar del Rio. The province is divided into 19 municipal districts. The capital is Santiago, situated upon the southern coast, on a bay of the same name.

Santiago; city, capital of province of the same name, situated at the head of Santiago Harbor. Population 43,090.

Santiago; barrio in municipal district of Cartagena, province of Santa Clara. Population 559.

Santiago, Arroyo; stream sinking in marsh in eastern part of Isla de Pinos.

Santiago, Rio; river flowing to north coast in province of Pinar del Rio.

Santiago de Cuba; municipal district in province of Santiago. Area 7 square miles. Population 45,478.

Santiago de las Vegas; municipal district in province of Habana. Area 29 square miles. Population 10,276.

Santiago de las Vegas; an interior city in province of Habana. Population 7,151.

Santo; barrio in municipal district of Calabazar, province of Santa Clara. Population 2,573.

Santo Cristo, Lomas del; hills in Habana Province.

Santo Cristo, Viejo; village in municipal district of Candelaria, province of Pinar del Rio.

Santo Domingo; municipal district in province of Santa Clara. Area 291 square miles. Population 10,372.

Santo Domingo; interior city in province of Santa Clara. Population 2,079.

Santo Domingo; barrio and village in municipal district of Los Palacios, province of Pinar del Rio.

Santo Domingo, Rio; river flowing to north coast in province of Santiago.

Santo Domingo, Rio; right-hand branch of Rio Hanabana, in province of Matanzas.

Santo Filomena; village in municipal district of Palma Soriano, province of Santiago.

Santo Tomas; barrio in municipal district of Santiago de Cuba, province of Santiago. Population 8,035.

Sao Arriba; village in municipal district of Holguin, province of Santiago.

Sao Arriba; barrio in municipal district of Holguin, province of Santiago. Population 1,080.

Sarey, Arroyo; stream in municipal district of Guantanamo, province of Santiago, flowing into Lake Lamarga.

Sebalo, Caleta de; small bay on south coast of province of Santa Clara.

Seborucal; barrio in municipal district of San Antonio de los Baños, province of Habana. Population 452.

Seborucal, El; hills in northern part of province of Santa Clara.

Seboruco, Arroyo; right-hand branch of Rio Jarahueca in Santiago Province.

Seboruco, Montes; mountains in municipal district of Alto Songo, province of Santiago.

Seboruco, Punta; point on north coast province of Matanzas.

Seco, Arroyo; small stream and cove on north coast of province of Santiago, municipal district of Gibara.

Seco, Arroyo; creek in southern part of municipal district of Cobre, province of Santiago.

Seco, Arroyo; creek flowing to north coast of municipal district of Gibara, province of Santiago.

Seco, Laguna; small lake in municipal district of Cienfuegos, province of Santa Clara.

Seco, Rio; branch of Rio la Majagua, in Habana Province.

Seco, Rio; short stream flowing into Lake Amarga, municipal district of Guantanamo, province of Santiago.

Seco de la Guira, Rio; small branch of Rio Tayabacoa in southern part of province of Santa Clara.

Segundo de Martinez; barrio in municipal district of San Juan y Martinez, province of Pinar del Rio. Population 893.

Seguro, Puerto; small port on north coast of province of Santiago.

Seiba; village in municipal district of Cabañas, province of Pinar del Rio.

Seibabo; town near north coast in municipal district of Yaguajay, province of Santa Clara.

Seibabo; village near head of Rio Sagua la Grande in municipal district of Santa Clara, province of Santa Clara.

Seibabo; barrio in municipal district of Santa Clara, province of Santa Clara. Population 1,598.

Seibabo; barrio in municipal district of Yaguajay, province of Santa Clara. Population 1,371.

Seibabo, Rio; small right-hand branch of Rio Manati in municipal district of Trinidad, province of Santa Clara.

Semillero; village in municipal district of Macagua, province of Matanzas.

Senado; barrio in municipal district of Nuevitas, province of Puerto Principe. Population 2,687.

Sequito, Rio; left-hand branch of Rio San Sebastian, western part of province of Pinar del Rio.

Serones, Punta; point on south coast of municipal district of Guantanamo, province of Santiago.

Serpenton, Lomas del; hills in Habana Province.

Serranos; barrio in municipal district of Guane, province of Pinar del Rio.

Serranos, Rio Las; a tributary of Rio San Felipe in western part of province of Pinar del Rio.

Sevilla; village in southern part of municipal district of Cobre, province of Santiago.

Sevilla; barrio in municipal district of Caney, province of Santiago. Population 561.

Sevilla; barrio in municipal district of Cobre, province of Santiago. Population 272.

Sevilla, Punta; point on west coast of municipal district of Niquero, Santiago Province.

Sevilla, Punta de; point on south coast of province of Puerto Principe, near mouth of Sevilla River.

Sevilla, Rio; river in province of Puerto Principe. Heads in Loma del Sibanicu and flows south and southeast to coast. Length 45 miles.

Sibanacan; barrio in municipal district of Guira de Melena, province of Habana. Population 1,136.

Sibanicu; town near hills of same name in municipal district of Puerto Principe, province of Puerto Principe.

Sibanicu; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 1,763.

Sibanicu, Lomas de; hills in eastern part of municipal district of Puerto Principe, province of Puerto Principe.

Sieba, Sierra de la; mountains in central part of Isla de Pinos.

Sierra; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 533.

Sierra; barrio in municipal district of Los Palacios, province of Pinar del Rio.

Sierra de Caballos; barrio in municipal district of Isla de Pinos, province of Habana.

Sierra de Casa; barrio in municipal district of Isla de Pinos, province of Habana.

Sierra de Casas, Rio de; stream flowing to north coast in Isla de Pinos into small bay of same name.

Sierra Derrumbado; barrio in municipal district of Mantua, province of Pinar del Rio. Population 757.

Sierra Morena; village near north coast in municipal district of Ceja de Pablo, province of Santa Clara.

Sierra Morena; barrio in municipal district of Ceja de Pablo, province of Santa Clara. Population 2,702.

Sierra Morena, Punta de; point on north coast of province of Santa Clara.

Sigua, Surgidero la; anchorage on south coast of municipal district of Santiago de Cuba, Santiago Province.

Siguaguas; village in municipal district of Cardenas, northern part of province of Matanzas.

Sigual; barrio in municipal district of Guantanamo, province of Santiago. Population 402.

Siguanea, Cerro de la; hill in western part of Isla de Pinos.

Siguanea, Ensenada de la; bay on western coast of Isla de Pinos.

Siguanea, Laguna la; lake in municipal district of Guane, southern part of province of Pinar del Rio.

Siguanea, Rio de la; river in western part of Isla de Pinos.

Siguas, Punta de; point on north coast of province of Santiago.

Siguas, Rio; short stream flowing to coast in municipal district of Santiago de Cuba, province of Santiago.

Silencio, Loma del; hills in municipal district of Cobre, province of Santiago.

Silencio, Punta del; point on north coast of province of Santiago.

Silverio, Punta; point on north coast of province of Santiago.

Sin Nombre, Punta; point on south coast of province of Pinar del Rio.

Sin Nombres, Lomas; hills in northern part of province of Santa Clara.

Sinu; barrio in municipal district of Jaguey Grande, province of Matanzas. Population 816.

Sipiabo, Rio; left-hand branch of Rio Manati, province of Santa Clara.

Sitio; barrio in municipal district of Baracoa, province of Santiago. Population 473.

Sitio; barrio in municipal district of Palma Soriano, province of Santiago. Population 1,335.

Sitiocito; village in municipal district of Sagua la Grande, province of Santa Clara.

Sitiocito; barrio in municipal district of Sagua la Grande, province of Santa Clara. Population 1,366.

Sitio Grande; village in municipal district of Calabazar, province of Santa Clara.

Sitio Grande; barrio in municipal district of Calabazar, province of Santa Clara. Population 590.

Sitio Grande; barrio in municipal district of Cifuentes, province of Santa Clara. Population 680.

Sitio Herrero; barrio in municipal district of San Cristobal, province of Pinar del Rio. Population 231.

Sitio Nuevo; village in municipal district of San Diego del Valle, province of Santa Clara.

Sitio Nuevo; barrio in municipal district of San Diego del Valle, province of Santa Clara. Population 359.

Sitio Potrero; barrio in municipal district of Placetas, province of Santa Clara.

Sitio Viejo; village in northern part of municipal district of Baracoa, province of Santiago.

Sitio Viejo; barrio in municipal district of Ranchuelo, province of Santa Clara. Population 939.

Socarreno, Arroyo; left-hand branch of Rio Cacuyaguin in municipal district of Gibara, province of Santiago.

Socarreno, Sierra de; mountains in northern part of province of Santiago, near coast.

Socarrona, Lomas; hills in municipal district of Mayari, province of Santiago.

Socorro; barrio and village in municipal district of Alto Songo, province of Santiago.

Sol, Punta del; point on north coast of province of Santiago.

Solavento, Punta; point at entrance of Bahia Mariel, north coast of province of Pinar del Rio.

Soldados, Punta de los; point on east coast of province of Santiago.

Soledad; village in municipal district of Cartagena, province of Santa Clara.

Soledad; village in municipal district of San Diego de los Baños, province of Pinar del Rio.

Soledad; barrio in municipal district of Cartagena, province of Santa Clara. Population 762.

Soledad; barrio in municipal district of Santa Cruz del Norte, province of Habana.

Soledad, Arroyo de la; small stream flowing to coast in municipal district of Puerto Principe, province of Puerto Principe.

Soledad, Rio; branch of Rio Mala in southern part of province of Puerto Principe.

Solis; village in municipal district of Cobre, province of Santiago.

Solis Arroyo; right-hand branch of Rio Castro, municipal district of Sagua de Tanamo, province of Santiago.

Sombrero, Cayo; islet off north coast of province of Santa Clara.

Somaula, Loma; hills in municipal district of Cobre, province of Santiago.

Somautes, Loma; hill in municipal district of Sagua de Tanamo, province of Santiago.

Sorda, Punta de la; point on west coast of San Antonio peninsula, province of Pinar del Rio.

Sotolongo, Monte; hill in Habana Province.

Sucia, Punta; point on south coast of province of Pinar del Rio.

Sumidero; village in municipal district of Guamacaro , province of Matanzas.

Sumidero; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Sumidero; barrio in municipal district of Guamacaro, province of Matanzas. Population 220.

Sumidero; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 2,478.

Sumidero, Arroyo del; left-hand branch of Rio Cuyaguateje in western part of province of Pinar del Rio.

Sumidero, Valle del; valley in Sierra de Organos, municipal district of Pinar del Rio, province of Pinar del Rio.

Sur; barrio in municipal district of Alacranes, province of Matanzas. Population 1,053.

Sur; barrio in municipal district of Canasi, province of Matanzas. Population 369.

Surgidero; a coast city in province of Habana. Population 3,683.

Surgidero; barrio in municipal district of Batabano, province of Habana. Population 3,683.

Tabacal, Punta; point on south coast of municipal district of Cobre, province of Santiago.

Tabaco, Loma del; hills near north coast of municipal district of Puerto Padre, province of Santiago.

Tabaco, Punta; point on west coast of province of Pinar del Rio.

Tablas; barrio in municipal district of Jaruco, province of Habana.

Tacajo; town on river of same name in municipal district of Holguin, province of Santiago.

Tacajo; barrio in municipal district of Holguin, province of Santiago. Population 896.

Tacajo, Rio; river in province of Santiago. Heads in hills in northern part of municipal district of Holguin and flows east into Bahia de Nipe. Length 15 miles.

Tacamara; village in municipal district of Holguin, province of Santiago.

Tacamara; barrio in municipal district of Holguin, province of Santiago. Population 832.

Taco, Ensenada; small bay on north coast of Baracoa, province of Santiago.

Tacre, Rio; river in southern part of municipal district of Baracoa, Santiago Province.

Taguasco; barrio in municipal district of Sancti Spiritus, province of Santa Clara.

Taguasco, Rio; left-hand branch of Rio Zaza, in municipal district of Sancti Spiritus, province of Santa Clara.

Taguayabon; village in northern part of province of Santa Clara, municipal district of Las Vueltas.

Taguayabon; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 912.

Tairones; village in municipal district of Pinar del Rio, province of Pinar del Rio.

Tairones; barrio in municipal district of Pinar del Rio, province of Pinar del Rio. Population 4,694.

Tajababo, Surgidero; anchorage on coast of municipal district of Santiago de Cuba, Santiago Province.

Tajacon, Rio; short branch of Rio Tacajo, in municipal district of Holguin, Santiago Province.

Talanquera, Punta; point on north coast of Habana Province.

Tana, Punta de; point on south coast of province of Puerto Principe.

Tana, Punta; point on west coast of province of Santiago.

Tana, Rio; river in province of Puerto Principe flowing to south coast. Length 33 miles.

Tana, Rio; river flowing to south coast in province of Puerto Principe.

Tana, Rio; small river flowing to west coast of province of Santiago.

Tanamo, Boca de; cove on north coast of municipal district of Sagua de Tanamo, province of Santiago.

Tanamo, Ensenada; small bay on north coast of municipal district of Sagua de Tanamo, province of Santiago.

Tanamo, Punta de; point on north coast of municipal district of Sagua de Tanamo, Santiago Province.

Taneo; barrio in municipal district of Caibarien, province of Santa Clara. Population 663.

Tapaste; municipal district in province of Habana. Area 30 square miles. Population 1,551.

Tapaste; village in Habana Province.

Tapaste; barrio in municipal district of Tapaste, province of Habana.

Tapaste, Lomas de; hills in Habana Province.

Tarara, Rio; small stream in Habana province flowing to north coast.

Tarquino, Punta; point on coast of municipal district of Cobre, southern part of Santiago Province.

Tarquino, Surgidero; anchorage on coast of municipal district of Cobre, southern part of province of Santiago.

Tasageras, Rio; river in municipal district of Gibara, province of Santiago, flowing into Bahia de Banes.

Tayaba; barrio in municipal district of Trinidad, province of Santa Clara. Population 989.

Tayaba, Rio; river flowing to south coast in municipal district of Trinidad, province of Santa Clara.

Tayabacoa, Rio; river flowing to south coast in municipal district of Sancti Spiritus, province of Santa Clara.

Teneria; village in municipal district of Guane, province of Pinar del Rio.

Teneria; barrio in municipal district of Guane, province of Pinar del Rio.

Teneria, Arroyo; short branch of Rio Salado, in western part of province of Pinar del Rio.

Terry; barrio in municipal district of Santa Isabel de las Lajas, province of Santa Clara. Population 817.

Tesico, Ensenada de; creek and inlet on north coast of province of Santa Clara, municipal district of Caibarien.

Tesoro, Laguna del; lake in Cienaga Zapata, province of Santa Clara.

Tetas Pujaron; hills in southeastern part of municipal district of Baracoa, province of Santiago.

Tetuan; barrio in municipal district of San Juan de las Remedios, province of Santa Clara. Population 294.

Ti Arriba; village in municipal district of Alto Songo, province of Santiago.

Ti Arriba; barrio in municipal district of Alto Songo, province of Santiago. Population 2,015.

Tibisial; barrio in municipal district of Placetas, province of Santa Clara.

Tiburcio, Punta; point on south coast of municipal district of Manzanillo, Santiago Province.

Tibijal, Punta; point on south coast of province of Santiago, municipal district of Cobre.

Tiguabo; village in municipal district of Guantanamo, province of Santiago.

Tiguabos; barrio in municipal district of Guantanamo, province of Santiago. Population 1,538.

Tinas, Arroyo de las; stream rising in interior of Isla de Pinos and sinking in marsh in southern part.

Tintorera, Punta la; point on south coast of province of Santiago.

Tio Ignacio, Paso; pass in Sierra del Jobo, province of Santiago.

Tio Pedro, Ensenada de; small bay on north coast of province of Puerto Principe.

Tirado; village in municipal district of San Luis, province of Pinar del Rio.

Tirado; barrio in municipal district of San Luis, province of Pinar del Rio. Population 648.

Toa; village on Toa River in southwestern part of municipal district of Baracoa, province of Santiago.

Toa, Cuchillas de; hills in municipal district of Baracoa, province of Santiago.

Toa, Rio; river in province of Santiago. Heads in western part of municipal district of Baracoa and flows southeast and northeast to coast near city of Baracoa. Length 65 miles.

Toar; barrio in municipal district of Baracoa, province of Santiago.

Tocinera, Cayos de la; group of islands north of province of Santa Clara, belonging to municipal district of Calabazar.

Tolete, Punta; point on north coast of San Antonio peninsula, province of Pinar del Rio.

Tolete, Punta; point on south coast of province of Santa Clara.

Tollosa, Punta; point on north coast of province of Santa Clara.

Tolo, Rio; river in municipal district of Sagua de Tanamo, province of Santiago.

Tomales, Ensenada los; small bay on north coast of municipal district of Holguin, Santiago Province.

Tomeguin; barrio in municipal district of Roque, province of Matanzas.

Toro; barrio in municipal district of Los Palacios, province of Pinar del Rio.

Toro, Arroyo; left-hand branch of Mayari River in Santiago Province.

Toro, Caleta del; small bay on south coast of province of Santa Clara.

Toro, Loma del; hill in southern part of municipal district of Cobre, province of Santiago.

Torre, Peninsula de la; peninsula on north coast of province of Santiago between Bahia de Nipe and ocean.

Tortugilla, Punta; point on south coast of province of Santiago.

Tramajos; barrio in municipal district of Macuriges, province of Matanzas. Population 404.

Tranquilidad; barrio in municipal district of Manzanillo, province of Santiago. Population 834.

Tres Ciebas; village in northern part of province of Matanzas.

Triana, Lomas de; hills in northern part of province of Matanzas.

Trilladeras, Arroyo; left-hand branch of Rio Jatibonico, in municipal district of Moron, province of Puerto Principe,

Trinidad; municipal district in province of Santa Clara. Area 828 square miles. Population 24,271,

Trinidad; city near coast in province of Santa Clara. Population 11,120.

Trinidad; barrio in municipal district of Guane, province of Pinar del Rio.

Trinidad; barrio in municipal district of Jaruco, province of Habana.

Trinidad; barrio in municipal district of Santiago de Cuba, province of Santiago. Population 6,887.

Triste, Cayo; islet north of province of Santa Clara.

Triunfo, Loma de; hill in Habana Province.

Trujillo, Punta; point on north coast of province of Santa Clara.

Tuerto, Pico; peak in western part of municipal district of Sancti Spiritus, province of Santa Clara.

Tuinuco, Rio; right-hand branch of Rio Zaza, in province of Santa Clara, heading in hills in western part of municipal district of Sancti Spiritus. Length 30 miles.

Tulipan; village in Habana Province, suburb of Habana.

Tumba; village in Habana Province.

Tumba Cuatro; village in Habana Province.

Tumbadera; village on north coast of province of Pinar del Rio, in municipal district of San Diego de Nuñez.

Tumbadera; barrio in municipal district of Alquizar, province of Habana. Population 1,310.

Tumbadero; barrio in municipal district of Guira de Melena, province of Habana. Population 632.

Tumba la Olla, Cayos; group of small islands north of province of Santa Clara.

Tuna, Laguna la; small lake in southern part of municipal district of Holguin, province of Santiago.

Tuna, Punta de la; point on southern coast of province of Puerto Principe, municipal district of Moron.

Tuna, Punta; point on south coast of province of Santa Clara, at mouth of Rio Salado.

Tunal, Punta; point on south coast of municipal district of Moron, province of Puerto Principe.

Tunas; barrio in municipal district of Puerto Padre, province of Santiago. Population 663.

Tunas de Zaza; village on south coast of province of Santa Clara, at mouth of Rio Zaza.

Tunas de Zaza; barrio in municipal district of Sancti Spiritus, province of Santa Clara. Population 1,014.

Turiguano, Isla de; island close to north coast of province of Puerto Principe.

Turquina, Rio; river in the southern part of province of Santiago. Rises in Sierra Maestra and flows to coast.

Turquino, Arroyo; small branch of Rio Turquina, near south coast of Santiago Province.

Turquino, Pico; peak in southern part of province of Santiago, reaching an elevation of 8,320 feet. Highest point in Sierra Maestra and in Cuba.

Ubero, Punta; point on north coast of province of Pinar del Rio.

Ubero, Punta del; point on north coast of municipal district of Holguin, Santiago Province.

Uberos, Bahia de las; small bay on coast of municipal district of Holguin, northern part of Santiago Province.

Uberos, Punta; point at entrance of Bahia Honda, on north coast of province of Pinar del Rio.

Ugao, Rio de; river in southern part of municipal district of Sagua de Tanamo, province of Santiago. Length 20 miles.

Ullao, Rio; left-hand branch of Rio Guanimican, province of Santiago.

Uñas; village in municipal district of Holguin, Santiago Province.

Uñas; barrio in municipal district of Holguin, province of Santiago. Population 1,324.

Unimazo, Rio; left-hand branch of Rio Manati, province of Santa Clara.

Unioa, Punta; point on north coast of island at junction of provinces of Matanzas and Santa Clara.

Union de Reyes; municipal district in province of Matanzas. Area 36 square miles. Population 5,226.

Uvas, Cayos de las; islets north of province of Pinar del Rio.

Vaca, Arroyo de la; left-hand branch of Rio Cascorro, province of Puerto Principe.

Vaca, Cayo; islet north of province of Santa Clara.

Vacabos, Punta; point on south coast of province of Santiago.

Vacia Botizas, Punta; point on south coast of Habana Province.

Valle; barrio in municipal district of San Antonio de los Baños, province of Habana. Population 167.

Valle, Lomas del; hills in Habana Province.

Valle, Rio del; small river flowing to south coast in province of Pinar del Rio.

Vaquero, Surgidero de; anchorage on southeast coast of province of Santiago.

Varadero; barrio in municipal district of Cardenas, province of Matanzas. Population 1,029.

Varas, Ensenada de las; small bay on north coast of province of Santa Clara, municipal district of San Juan de los Remedios.

Vedado; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,200.

Vega Alta; barrio in municipal district of San Antonio de las Vueltas, province of Santa Clara. Population 1,140.

Vega Alta; village in municipal district of Santa Clara, province of Santa Clara.

Vega, Arroyo; small stream on south coast of municipal district of Guantanamo, province of Santiago.

Vegas; barrio in municipal district of Nueva Paz, province of Habana. Population 1,608.

Vegas Nuevas; barrio in municipal district of Consolacion del Norte, province of Pinar del Rio. Population 944.

Veguita; barrio in municipal district of Baracoa, province of Santiago. Population 541.

Veguita; barrio in municipal district of Bayamo, province of Santiago. Population 3,784.

Veguitas; town in western part of municipal district of Bayamo, province of Santiago.

Vela, Arroyo la; short left-hand branch of Rio Toa, in Santiago Province.

Vela, Cayo la; islet north of province of Santa Clara, municipal district of Calabazar.

Vela, Sierra la; mountains in municipal district of Guantanamo, province of Santiago.

Velasco; barrio in municipal district of Holguin, province of Santiago. Population 1,777.

Veliz; barrio in municipal district of Niquero, province of Santiago. Population 580.

Ventas; barrio in municipal district of Jiguani, province of Santiago. Population 1,225.

Ventura, Punta; point on south coast of Habana Province.

Venturilla; village in municipal district of Cuevitas, province of Matanzas.

Venturilla; barrio in municipal district of Cuevitas, province of Matanzas. Population 1,667.

Vereda, Nueva; an interior city in province of Habana. Population 2,416.

Vereda, Nueva; municipal district in province of Habana. Area 14 square miles. Population 2,416.

Verde, Rio; river flowing to west coast in southwestern part of province of Pinar del Rio.

Verde, Sierra; mountains in central part of municipal district of Baracoa, province of Santiago.

Verga, Cala de la; small bay on southern coast of province of Santiago.

Versalles; barrio in municipal district of Cardenas, province of Matanzas.

Vertientes; village in southeastern part of municipal district of Baracoa, province of Santiago.

Viajacas; barrio in municipal district of Bejucal, province of Habana.

Viajacas, Rio; river in Habana Province.

Viajacas, Rio; river flowing into Bahia Honda, north coast of province of Pinar del Rio.

Viana; village in municipal district of Calabazar, province of Santa Clara.

Viana; barrio in municipal district of Calabazar, province of Santa Clara. Population 2,111.

Vibicial, Lomas del; hills in northern part of municipal district of Sagua de Tanamo, province of Santiago.

Vicana; barrio in municipal district of Manzanillo, province of Santiago. Population 1,642.

Victoria de las Tunas; town in central part of municipal district of Puerto Padre, province of Santiago.

Victorio, Lomas de la; hills in Habana Province.

Vieja; village in municipal district of Matanzas, province of Matanzas.

Vieja, Arroyo de la; small left-hand branch of Rio Sagua la Chica, near north coast, in province of Santa Clara.

Vieja, Punta de la; point on north coast of province of Santiago.

Vieja Bermeja; village in municipal district of Cabezas, province of Matanzas.

Viertientes; barrio in municipal district of Baracoa, province of Santiago. Population 650.

Vigia; village near north coast in municipal district of Cabañas, province of Pinar del Rio.

Vigia; barrio in municipal district of Cabañas, province of Pinar del Rio.

Vigia, Punta de la; point on west coast of Isla de Pinos.

Vigia Santa Lucia, Lomas; hills in municipal district of Mantua, province of Pinar del Rio.

Villajana, Loma de; hills .in municipal district of Alto Songo, province of Santiago.

Villareal, Monte; hill near north coast of Habana Province.

Viñales; municipal district in province of Pinar del Rio. Area 208 square miles. Population 17,700.

Viñales; an interior city in province of Pinar del Rio. Population 1,600.

Vincula; barrio in municipal district of Guantanamo, province of Santiago. Population 754.

Vino, Ensenada del; small bay on north coast of municipal district of Gibara, province of Santiago.

Virdu, Arroyo; right-hand branch of Canapu River in Santiago Province.

Virtudes; village in municipal district of Artemisa, province of Pinar del Rio.

Virtudes; barrio in municipal district of Artemisa, province of Pinar del Rio. Population 719.

Virtudes; barrio in municipal district of Ceiba del Agua, province of Habana.

Vista Hermosa; town in municipal district of Puerto Principe, province of Puerto Principe.

Vista Hermosa; barrio in municipal district of Placetas, province of Santa Clara.

Vista Hermosa; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 981.

Vita, Ensenada; small bay on north coast of Santiago, municipal district of Gibara.

Voladores, Arroyo; branch of Rio Hanabana in province of Santa Clara.

Vuelta Grande, Ensenada; small bay on south coast of municipal district of Niquero, province of Santiago.

Vueltas; an interior city in the province of Santa Clara. Population 1,336.

Vueltas, Arroyo; small left-hand branch of Rio Zaza, province of Santa Clara.

Vueltas, Rio las; river rising in hills in northern part of municipal district of Ciego de Avila, province of Puerto Principe, and flowing south, where it sinks in coast swamps. Bears name of Arroya la Seiba near coast.

Wajay; barrio in municipal district of Cano, province of Habána. Population 1,887.

Yaba; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 2,295.

Yabason; village on river of same name in municipal district of Gibara, province of Santiago.

Yabason; barrio in municipal district of Gibara, province of Santiago. Population 673.

Yabason, Rio; river in municipal district of Gibara, province of Santiago.

Yabu; village in municipal district of San Diego del Valle, province of Santa Clara.

Yabu; barrio in municipal district of San Diego del Valle, province of Santa Clara. Population 1,130.

Yabu, Rio; right-hand branch of Rio Sagua la Grande in northern part of province of Santa Clara. Length 24 miles.

Yabucito; barrio in municipal district of Santo Domingo, province of Santa Clara. Population 720.

Yacabo Abajo, Rio; river in southern part of municipal district of Baracoa, province of Santiago.

Yagua, Arroyo; small right-hand branch of Rio Zaza in municipal district of Sancti Spiritus, province of Santa Clara.

Yaguajay; municipal district in province of Santa Clara. Area 442 square miles. Population 9,718.

Yaguajay; city near coast in province of Santa Clara. Population 1,206.

Yaguajay; barrio in municipal district of Yaguajay, province of Santa Clara. Population 2,692.

Yaguanabo, Rio; river flowing to south coast in municipal district of Trinidad, province of Santa Clara.

Yaguaneque, Ensenada; small bay on north coast of municipal district of Sagua de Tanama, province of Santiago.

Yaguani, Rio; largest left-hand branch of Toa River, heading in Sierra de Moa. Length 20 miles.

Yaguarama, Rio; river in southern part of province of Santa Clara.

Yaguaramas; village in municipal district of Cienfuegos, province of Santa Clara.

Yaguaramas; barrio in municipal district of Cienfuegos, province of Santa Clara. Population 3,609.

Yaguaramas, Arroyo; stream flowing to south coast in municipal district of Trinidad, province of Santa Clara.

Yaguasos, Arroyo; coast creek in western part of province of Pinar del Rio.

Yagunal, Lomas del; hills in municipal district of Trinidad, southern part of province of Santa Clara.

Yaleras; town in southern part of municipal district of Guantanamo, province of Santiago.

Yaleras, Rio; river rising in northwestern part of municipal district of Guantanamo, province of Santiago, and flowing east, south, and southeast to coast. Length 40 miles.

Yamaniguey, Rio; stream in northern part of municipal district of Baracoa, province of Santiago.

Yamaraguas; barrio in municipal district of Guines, province of Habana.

Yana, Caleta de la; cove on south coast of municipal district of Baracoa, province of Santiago.

Yana, Punta de la; point on south coast of province of Santiago.

Yana, Punta de la; point on south coast of province of Pinar del Rio.

Yana, Punta de la; point on north coast of province of Pinar del Rio.

Yanaguabo, Rio; right-hand branch of Rio Cauto, province of San Diego.

Yara; town on Jicotea River in western part of province of Santiago.

Yara; barrio in municipal district of Manzanillo, province of Santiago. Population 1,234.

Yara, Rio; small river flowing to west coast in municipal district of Manzanillo, province of Santiago.

Yarey; barrio in municipal district of Puerto Padre, province of Santiago. Population 1,231.

Yarey, Lagunas de; lakes in municipal district of Holguin, province of Santiago.

Yarey, Rio; river in northeastern part of municipal district of Puerto Padre, Santiago Province, flowing to coast.

Yareyal; barrio in municipal district of Holguin, province of Santiago. Population 927.

Yareyal, Arroyo; small right-hand branch of Rio Matamoras in municipal district of Holguin, province of Santiago.

Yaribacoa; town on west coast of municipal district of Manzanillo, province of Santiago.

Yarigua, Rio; river heading in hills in western part of province of Puerto Principe, municipal district of Puerto Padre, and flowing north to coast. Length 33 miles.

Yarigua, Rio; right-hand branch of Rio Cabreras, in municipal district of Puerto Padre, Santiago province. Length 24 miles.

Yateras; barrio in municipal district of Guantanamo, province of Santiago. Population 1,651.

Yauza Yana, Rio; river flowing to north coast, in municipal district of Moron, province of Puerto Principe.

Yayabo, Rio; right-hand branch of Rio Zaza, in municipal district of Sancti Spiritus, province of Santa Clara.

Yayal; village in municipal district of Holguin, Santiago Province.

Yayal; barrio in municipal district of Viñales, province of Pinar del Rio. Population 524.

Yeguas; barrio in municipal district of Puerto Principe, province of Puerto Principe. Population 748.

Yeguas, Rio; river in province of Puerto Principe. Rises in western part of municipal district of Puerto Principe and flows southwest to coast. Length 40 miles.

Yenas, Cayo; small island off north coast of municipal district of Sagua de Tanamo, province of Santiago.

Yiguasi, Rio; right-hand branch of Mayari River, in Santiago Province.

Ytabo; barrio in municipal district of Madruga, province of Habana.

Yucatan, La; hills in municipal district of Puerto Principe, province of Puerto Principe.

Yumuri, town in municipal district of Matanzas, Matanzas Province.

Yumuri, Rio; river in province of Matanzas, flowing into Matanzas Bay.

Yumuri, Rio; river in Eastern part of Santiago Province. Heads in Sierra de las Minas y San German, flows east and north to the coast.

Yuraguano, Punta; point on north coast of province of Santiago, municipal district of Holguin.

Zabala; village in northern part of municipal district of Sagua de Tanamo, province of Santiago.

Zabala; barrio in municipal district of Sagua de Tanamo, province of Santiago. Population 887.

Zabaleta; barrio in municipal district of Aguacate, province of Habana.

Zacatecas; barrio in municipal district of Caney, province of Santiago. Population 462.

Zacatecas, Arroyo; left-hand branch of Rio Jiguiamo, in northern part of province of Santa Clara. Length 18 miles.

Zajas, Arroyo; right-hand branch of Bio River in municipal district of Mayari, province of Santiago.

Zulueta; village in municipal district of Camajuani, province of Santa Clara.

Zulueta; barrio in municipal district of Camajuani, province of Santa Clara. Population 1,318.

Zambumbia; barrio in municipal district of Quemado de Guines, province of Santa Clara. Population 848.

Zambumbia, Arroyo; left-hand branch of Mayari River, in Santiago Province.

Zanjon, Arroyo del; small stream flowing to north coast in province of Puerto Principe.

Zapata; barrio in municipal district of Bolondron, province of Matanzas.

Zapata, Cienega de; a great marsh near south coast, 25 miles north and south by 100 miles east and west. The greater part lies in Matanzas Province, separated from a smaller eastern part in Santa Clára Province by Hataguanico River.

Zapata, Peninsula de; large territory in southern part of island, belonging to province of Santa Clara.

Zapote, Paso de; pass in Sierra del Jobo, province of Santiago.

Zarrapanditta, Arroyo; left-hand branch of Rio Jatibonico, municipal district of Moron, province of Puerto Principe.

Zarzal; town on Rio Jicotea in southwestern part of province of Santiago.

Zarzal; barrio in municipal district of Manzanillo, province of Santiago. Population 2,276.

Zarzal, Arroyo; small right-hand branch of Rio Cuyaguateje, in western part of province of Pinar del Rio.

Zarzal, Arroyo; small stream in municipal district of Nuevitas, province of Puerto Principe.

Zaza, Cayo; islet at mouth of Rio Zaza, province of Santa Clara.

Zaza, Rio; an important river in province of Santa Clara. Heads in hills in western part of municipal district of Placetas, and flows southeastward and southwestward to coast. Length 85 miles.

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PUBLICATIONS OF UNITED STATES GEOLOGICAL SURVEY.

[Bulletin No. 192.]

The serial publications of the United States Geological Survey consist of (1) Annual Reports, (2) Monographs, (3) Bulletins, (4) Mineral Resources, (5) Water-Supply and Irrigation Papers, (6) Topographic Atlas of United States—folios and separate sheets thereof, (7) Geologic Atlas of United States—folios thereof. A circular giving complete lists may be had on application.

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GEOLOGICAL RELATIONS AND DISTRIBUTION OF PLATINUM AND ASSOCIATED METALS.—KEMP

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UNITED STATES GEOLOGICAL SURVEY
CHARLES D. WALCOTT, DIRECTOR

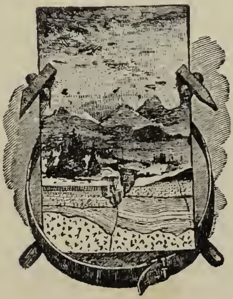
THE GEOLOGICAL RELATIONS AND DISTRIBUTION

OF

PLATINUM AND ASSOCIATED METALS

BY

JAMES FURMAN KEMP



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LETTER OF TRANSMITTAL.

Department of the Interior,
United States Geological Survey,
Washington, D. C., June 8, 1901.

Sir: I return herewith a report on platinum, by Prof. J. F. Kemp, which I have read and recommend for publication as a bulletin.

Very respectfully,

S. F. Emmons,
Geologist in Charge of Section of Metalliferous Ores.

Hon. Charles D. Walcott,
Director of United States Geological Survey.

THE GEOLOGICAL RELATIONS AND DISTRIBUTION OF PLATINUM AND ASSOCIATED METALS.

By J. F. Kemp.

CHEMICAL RELATIONS.

Platinum is one of seven metals which are customarily described as the "gold group." They are separable into three subgroups, based upon their affinities for oxygen.

(1) "Platinum and gold do not combine directly with oxygen under any circumstances.

(2) "Palladium, rhodium, and iridium oxidize when they are heated in the air or oxygen, but their oxides decompose on strong ignition into metal and oxygen.

(3) "Ruthenium and osmium unite with oxygen to form volatile oxides, which do not undergo decomposition even at the highest temperatures."[a]

With the omission of gold it is likewise customary to speak of the remaining six as the "platinum group."

If we fix attention upon the six it is evident that they are separable into two contrasted divisions according to their atomic weights. Thus, ruthenium (101.7), rhodium (103), and palladium (107) are near together, and then after a large interval platinum (194.9), iridium (193.1), and osmium (191) are likewise closely related. With the last named gold (197.2) is to be placed.

When grouped according to the periodic law they fall into the same two divisions of three each, and as they are placed in the same vertical columns with iron, cobalt, and nickel, it is natural to draw parallels between the latter and the former. Iron, ruthenium, and osmium have similar properties; so also have cobalt, rhodium, and iridium, and, finally, nickel, palladium, and platinum. Palladium and platinum exhibit analogies with silver and gold, while ruthenium and osmium are similarly related to molybdenum and tungsten.

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[a] Roscoe and Schorlemmer, Treatise on Chemistry, II, Part II, p. 359.

An appreciation of these relations is important in enabling the reader to gain a correct conception of the several metals, and it may be added that to a certain degree the same association appears in the geological occurrence; but, as will shortly be pointed out, there are other geological facts on which the chemical relations, so far as present knowledge goes, throw no light. Thus, for example, platinum is almost always derived from rocks rich in magnesium and is commonly associated with chromic oxide, yet neither magnesium nor chromium has been mentioned above.

In specific gravity the purified metals range as follows: Osmium, 22.477; iridium, 22.38; platinum, 21.48; ruthenium, 12.261; rhodium, 12.1; palladium, 11.4.

In fusibility the order is as follows: Osmium is the most refractory and has not been melted; ruthenium, iridium, and rhodium follow in order; platinum is next, and its melting point is fixed at 1,779° C.; palladium is the most fusible of all, and melts at about the same temperature as wrought iron.

MINERALS.

The minerals containing the metals of the platinum group are the following. With each a brief outline of its physical and chemical properties is given, for convenient reference and as a guide in identification. The chief source of this information has been the sixth edition of Dana's Treatise on Mineralogy, and Kokscharow's paper on "Gediegenes Platin," in his Materialen zur Mineralogie Russlands, Vol. V, p. 177. Both these have been supplemented by the writer's experience in the field.

Platinum.—The mineral called by this name is an alloy of platinum, iridium, rhodium, palladium, and often osmium, with varying amounts of iron, copper, and gold. Iridosmine is also usually present, but seems to be mechanically involved in the others. The complex nature suggested to Hausmann the name polyxene, meaning many strangers or guests. Full details are given subsequently regarding the chemical composition of the crude platinum of commerce. The crystals are isometric, but extremely rare. The cube is the commonest form. Nuggets, scales, and irregular grains are the usual shapes, and where taken near the mother rock they may be angular. Somewhat uncommonly chromite constitutes a part of the nuggets, and even other minerals, such as serpentine, olivine, pyroxene, and biotite, have been discovered, as noted later.

Cleavage, none; fracture, hackly. Hardness, 4 to 6. Malleable, ductile, sectile. Sp. gr., 14 to 19. Melted platinum is 19.7 and hammered is 21.23. The admixture of iron especially reduces the specific gravity, as iron itself is 7.3 to 7.8. Low specific gravities therefore indicate much iron. The variety rich in iron is called iron-platinum and its specific gravity ranges below 16. Luster, metallic. Color

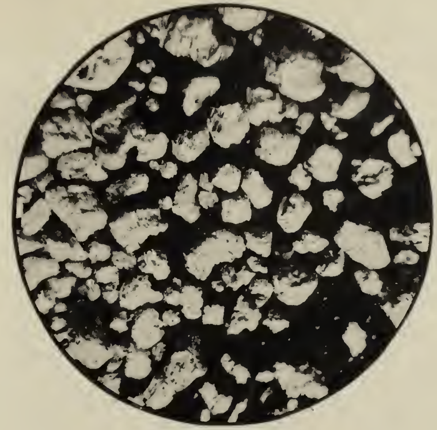
PLATE I.

PLATE I.

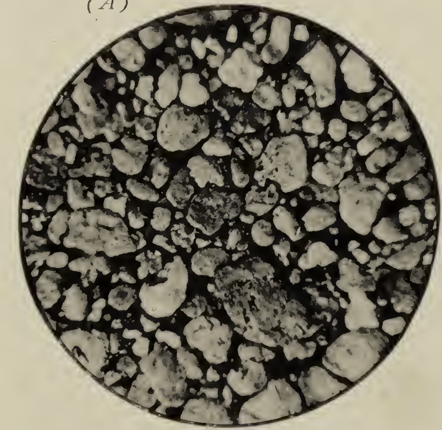
(*A*) Rough, unworn platinum nuggets, Tulameen River, British Columbia. × 35 diam.

(*B*) Thin, worn platinum nuggets, Colorado River, Colombia. × 35 diam.

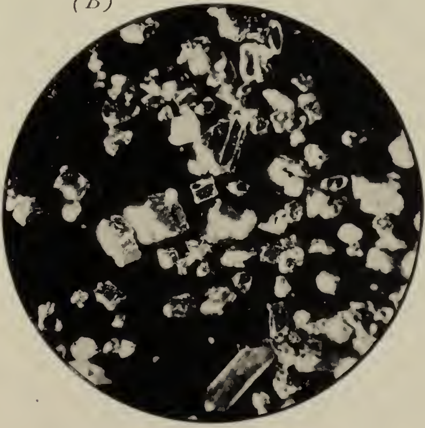
(*C*) Cubes of sperrylite, prisms of cassiterite, Vermillion mine, Ontario. × 35 diam.



(*A*)



(*B*)



(*C*)

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varies from silvery white to dark gray or almost black. Strong contrasts appear even in the platinum of a single district. The nuggets may be coated with a black, soluble crust, and when dealing with fine dust the observer may experience the greatest difficulty in recognizing the platinum with a lens or a microscope as against chromite or magnetite. The native platinum may be strongly magnetic, even forming natural lodestone, or it may be comparatively inert. It can, however, be readily separated from less magnetic materials in modern magnetic concentrators, such as the Wetherell. When the nuggets and dust are obtained near the mother rock they are angular and rough (Pl. I, *A*), but when they have been transported far they appear as thin scales (Pl. I, *B*).

Platinum is not essentially affected by the ordinary acids, but yields to boiling aqua regia. As a test of pannings, treatment with ordinary acids is not of much value, because chromite, the commonest associate of platinum, is insoluble. Platinum, if not too small, will be found to be malleable, whereas chromite is brittle. From colors of gold it may be separated by quicksilver, becarse the gold amalgamates and the platinum does not. Among the placer miners platinum is ofted called "white gold."

Platiniridium.—With a great increase in iridium, which in normal platinum does not exceed 5 per cent, this mineral is developed. The iridium may be over 75 per cent. Crystal system, isometric, the cube being the chief form, but as the mineral itself is excessively rare, and when found is usually in scales and grains, crystals are very uncommon. Hardness, 6.7, surpassing platinum. Sp. gr., 22.6 to 23, being thus the heaviest of known minerals. Color, white. Luster, metallic.

Palladium is alloyed in practically all cases with a little platinum and iridium. It is isometric and when crystallized is practically always in octahedrons, but it also occurs in grains and fibrous masses. In any form it is excessively rare. Hardness, 4.5 to 5. Sp. gr., 11.3 to 11.8. Luster, metallic. Color, whitish, steel-gray. Malleable, ductile, sectile.

Allopalladium.—An allotropic form of palladium, hexagonal in crystallization, forming small 6-sided tables. Color, silver-white to pale steel-gray. Excessively rare.

Iridosmine (often called osmiridium).—This is an alloy of iridium and osmium. The other metals of the platinum group are very subordinate, platinum itself being at most under 3 per cent. Ruthenium, however, which fails in platinum, may reach 8 per cent, and is usually present. Hexagonal, but almost always in flattened grains (see Pl. V, *A*). Hardness, 6.7. Sp. gr., 18.8 to 21.12, being thus heavier than platinum, but less heavy than platiniridium. Luster, metallic. Color, tin-white to steel-gray. Iridosmine is a minor associate of platinum, but is harder. Two varieties have been made, based on Siberian occurrences, viz, newjanskite, with over 40 per cent iridium, and sisserskite, under 30 per cent iridium. No provision seems to have been made for percentages between 30 and 40, but none appear in analyses yet recorded. Sisserskite has a slightly higher specific gravity than newjanskite.

All the above minerals are alloys. There are but two definite natural compounds known of any metals of the platinum group with nonmetallic elements—sperrylite and laurite.

Sperrylite.—Arsenide of platinum ($PtAs_2$) with a little antimony and rhodium. Isometric, the octahedron and cube being commonest; the pentagonal dodecahedron, the rhombic dodecahedron, and the diploid are known (see Pl. I, *C*). Hardness, 6 to 7. Sp. gr., 10.6. Luster, metallic. Color, tin-white, streak black. If slowly roasted in the open tube sperrylite gives a sublimate of arsenic trioxide and melts easily. Sperrylite is a very rare mineral and until recently has been known from only two localities—western Ontario and North Carolina. Within the last year, however, investigations of the copper ores of the Rambler mine, Wyoming, by Professors Wells and Penfield, have shown minute crystals of sperrylite in the covellite which forms a considerable part of the oxidized zone of the mine. The platinum which has occasionally been found by assay in other ores may have been present as sperrylite.

Laurite is an extremely rare sulphide of ruthenium with a minor amount of osmium. Isometric, in small cubo-octahedrons. Hardness, above 7. Sp. gr., 6.99. Luster, metallic. Color, dark iron-black; powder, dark gray. Brittle. Known only from the platinum washings of Borneo.

CHEMICAL COMPOSITION OF NATIVE PLATINUM AND IRIDOSMINE.

In the accompanying table have been collected analyses of 42 samples of platinum and 2 of platiniridium. They are arranged in order from those highest in platinum to those lowest. "I-O" stands for iridosmine. In the diagram, fig. 1, a series of curves has been plotted, the percentages of platinum in the above analyses being used as abscissas. The percentages of the other metals are used as ordinates. Inasmuch as no definite chemical relation exists among the members of the alloys, the percentages rather than the molecular proportions have been employed. More or less of iridium and of osmium in some of the analyses is involved in the contained iridosmine. In a few cases, however, the two metals have been determined and the presumption is that they were not combined in this individual mineral. Iridosmine is a very insoluble substance and is sometimes left as a residue during the solution of a nugget. Nearly all the percentages of osmium which are recorded indicate loss rather than actual determinations of the pure metal, although this has formed much the greater part of such reported losses. In summary, it may be said that the analyses have been based upon samples from the following localities:

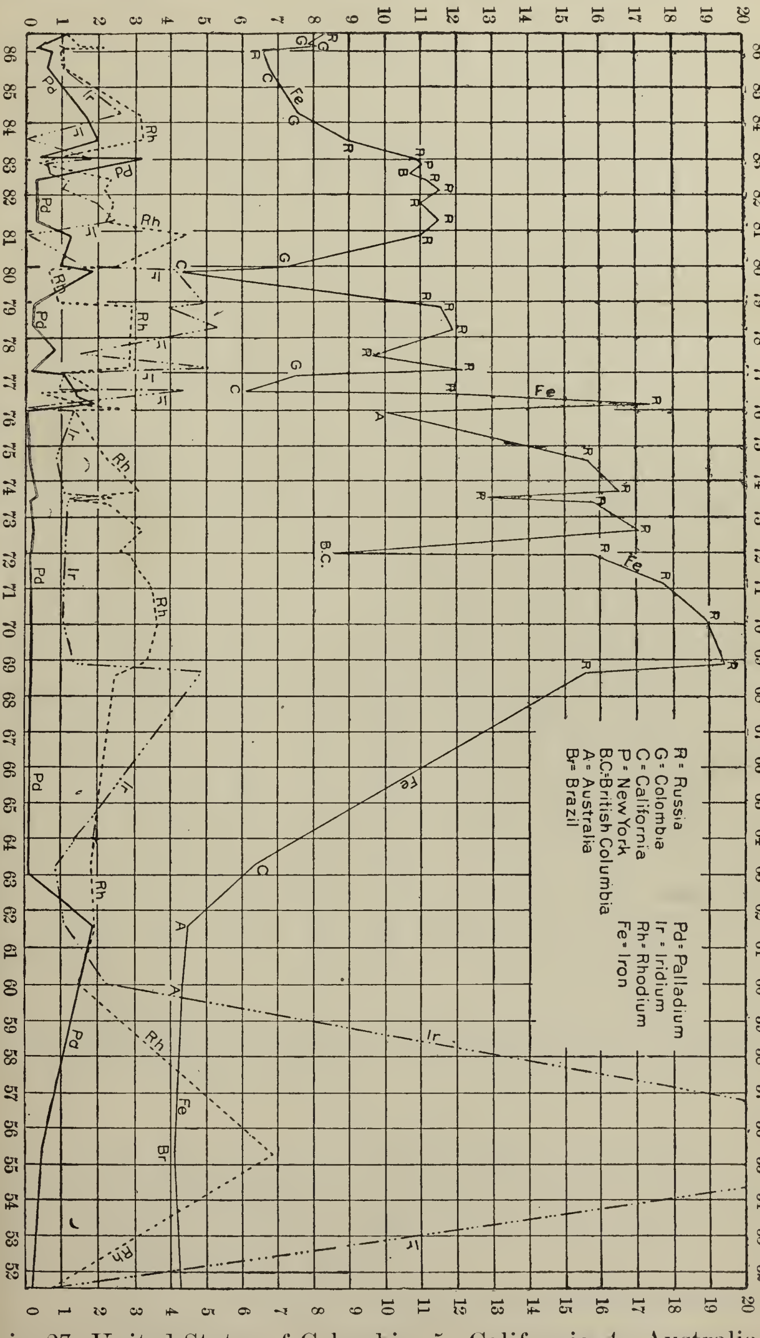

FIG. 1.—Diagram illustrating the chemical composition of native platinum.

Russia, 27; United States of Colombia, 5; California, 4; Australia, 3; New York, 1; British Columbia, 1; Oregon, 1; Brazil, 1.

Table of analyses of platinum nuggets.

	1. Russia.	2. Colombia.	3. Colombia.	4. Russia.	5. California.	6. Colombia.	7. Russia.	8. Russia.	9. New York.	10. Borneo.	11. Russia.
Pt	86.50	86.20	86.16	85.97	85.50	84.34	83.49	83.07	82.81	82.60	82.46
Ir	--------	.85	1.09	.98	1.05	2.52	Tr.	1.91	.62	.66	1.21
Rh	1.15	1.40	2.16	.96	1.00	3.13	3.17	.59	.28	--------	2.35
Pd	1.10	.50	.35	.75	.60	1.66	1.94	.26	3.10	--------	.23
Os	1.08	--------	.97	.54	--------	.19	--------	--------	--------	--------	Tr.
Ru	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
I-O	1.40	.95	1.19	2.10	1.10	1.56	--------	1.80	--------	3.80	--------
Au	--------	1.00	--------	--------	.80	--------	--------	--------	--------	.20	--------
Insol	--------	--------	--------	--------	--------	--------	.93	--------	--------	--------	1.38
Fe	8.32	7.80	8.03	6.54	6.75	7.52	8.98	10.79	11.04	10.67	11.23
Cu	.45	.60	.40	.86	1.40	Tr.	--------	1.30	.39	.13	.64
Sand	--------	.95	--------	--------	2.95	--------	--------	--------	--------	--------	--------
Mn	--------	--------	.10	--------	--------	.31	--------	--------	--------	--------	--------
Loss	--------	--------	--------	--------	--------	--------	1.49	--------	--------	--------	.50
Total	100.00	100.25	101.17	98.70	101.15	101.23	100.00	99.72	--------	98.36	100.00

	12. Russia.	13. Russia.	14. Russia.	15. Russia.	16. Colombia.	17. California.	18. Russia,	19. Russia.	20. Russia.	21. Russia.	22. Russia.
Pt	82.16	81.72	81.34	80.87	80.00	79.85	78.94	78.92	78.38	77.50	77.14
Ir	1.00	1.81	2.42	.06	1.55	4.20	4.97	3.97	5.32	1.45	5.10
Rh	2.19	2.44	2.14	4.44	2.50	.65	.86	2.87	2.79	2.80	2.74
Pd	.25	.30	.30	1.30	1.00	1.95	.28	.24	.17	.85	.22
Os	Tr.	Tr.	Tr.	--------	--------	.05	1.25	Tr.	Tr.	2.30	Tr.
Ru	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
I-O	--------	--------	--------	.11	1.40	4.95	1.96	--------	--------	2.35	--------
Au	--------	--------	--------	--------	1.50	.55	--------	--------	--------	--------	--------
Insol	1.89	1.04	.57	--------	--------	--------	--------	1.09	.32	--------	.98
Fe	11.50	10.94	11.48	10.92	7.20	4.45	11.04	11.52	11.72	9.60	12.13
Cu	.21	.95	1.13	2.30	.65	.75	.70	.25	.28	2.15	.34
Sand	--------	--------	--------	--------	4.35	2.60	--------	--------	--------	1.00	--------
Mn	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Loss	.80	.80	.62	--------	--------	--------	--------	1.44	1.02	--------	1.35
Total	100.00	100.00	100.00	100.00	100.15	100.00	100.00	100.00	100.00	100.00	100.00

Table of analyses of platinum nuggets—Continued.

	23. Colombia.	24. California.	25. Russia.	26. Russia.	27. New South Wales.	28. Russia.	29. Russia.	30. Russia.	31. Russia.	32. Russia.	33. British Columbia.
Pt	76.82	76.50	76.40	76.22	75.90	74.67	73.70	73.58	73.42	72.61	72.07
Ir	1.18	.85	4.30	Tr.	1.30	.83	1.15	2.35	1.12	1.14	1.14
Rh	1.22	1.95	.30	2.50	1.30	2.26	3.12	1.15	2.30	3.10	2.57
Pd	1.14	1.30	1.40	1.87	Tr.	.18	.23	.30	.15	.23	.19
Os	--------	1.25	--------	Tr.	--------	Tr.	Tr.	2.14	Tr.	Tr.	--------
Ru	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
I-O	7.98	7.55	.50	--------	9.30	--------	--------	2.30	--------	--------	10.51
Au	1.22	1.20	.40	--------	--------	--------	--------	--------	--------	--------	--------
Insol	--------	--------	--------	.50	--------	2.30	2.56	--------	2.62	3.53	--------
Fe	7.43	6.10	11.70	17.30	10.15	15.54	16.65	12.98	15.88	17.13	8.59
Cu	.88	1.25	4.10	.36	.41	1.98	1.47	5.20	2.01	.32	3.39
Sand	2.41	1.50	1.40	--------	1.22	--------	--------	--------	--------	--------	1.69
Mn	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Loss	--------	--------	--------	1.25	--------	2.24	1.12	--------	2.50	1.94	--------
Total	100.28	99.45	100.50	100.00	99.48	100.00	100.00	100.00	100.00	100.00	100.15

	34. Russia.	35. Russia.	36. Russia.	37. Russia.	38. Russia.	39. California.	40. Australia.	41. Australia.	42. Brazil.	43. Oregon.	44. Russia.
Pt	71.94	71.20	70.15	68.95	68.72	63.30	61.40	59.80	55.44	51.45	19.64
Ir	1.18	1.15	1.03	1.34	4.73	.70	1.10	2.20	27.79	.40	76.80
Rh	2.76	3.46	3.61	3.30	2.48	1.80	1.85	1.50	6.86	.65	--------
Pd	.14	.18	.20	.21	.20	.10	1.80	1.50	.49	.15	.89
Os	Tr.	Tr.	Tr.	Tr.	Tr.	--------	--------	.80	Tr.	--------	--------
Ru	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
I-O	--------	--------	--------	--------	6.36	22 55	26.00	25.00	--------	37.30	--------
Au	--------	--------	--------	--------	--------	.30	1.20	2.40	--------	.85	--------
Insol	2.87	3.85	3.87	3.75	--------	--------	--------	--------	--------	--------	--------
Fe	15.79	17.73	18.90	18.93	15.58	6.40	4.55	4.30	4.14	4.30	--------
Cu	3.72	.50	1.16	1.59	.30	4.25	1 10	1.10	3.30	2.15	1.78
Sand	--------	--------	--------	--------	--------	--------	1.20	1.20	--------	3.00	--------
Mn	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------
Loss	1.60	1.93	1.08	1.93	1.63	--------	--------	--------	--------	--------	--------
Total	100.00	100.00	100.00	100.00	100.00	99.40	100.20	100.00	98.02	100.25	99.11

NOTES TO TABLE.

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43. Oregon. Deville and Debray. As under 2.
44. Russia. Nijni Tagilsk, Platiniridium. L. F. Svanberg. As under 3.

PERCENTAGE OF VARIOUS METALS CONTAINED IN SAMPLES ANALYZED.

When the analyses are studied it is evident that the platinum from certain localities has a characteristic chemical composition.

Platinum.—The platinum varies from 86.50 to 51.45 per cent for platinum proper. One sample of platiniridium has 19.64 and another has 55.44 per cent. Sixteen of the analyses contain 80 per cent platinum and above, twenty are between 70 and 80 per cent, and six are below 70 per cent, exclusive of the platiniridium. In the analyses of samples whose platinum falls below 63 per cent iridosmine is present in such amounts as to be the chief cause of the low percentage.

Iridium.—Iridium varies from a trace to a maximum of 5.32 per cent (No. 20), but of course it rises much higher in platiniridium. In No. 44, which is based on the latter mineral, it reads 76.80 per cent. In those analyses which have recorded percentages of iridosmine the total iridium would be higher if the specimens had been considered commercial samples, but, as has been stated, the iridosmine is probably a mechanical inclusion. The amount of the combined iridium seems to have no definite relation with the platinum.

Rhodium.—Rhodium is not recorded in the sample from Borneo (No. 10), but it does appear in all the others. Its minimum percentage is 0.28 in No. 9, the sample coming from New York. Its maximum is 4.44 in No. 15, a Russian specimen. In the sample of platiniridium (No. 42) it reads 6.86. When the curve of the rhodium is plotted it exhibits some points of similarity with that of iridium, but there are so many other marked contrasts that one can not trace a definite relation between them.

Palladium.—Palladium is not recorded from Borneo, but it is invariably mentioned in all the other analyses. It ranges from a trace as a minimum to 1.95 per cent in No. 17, a California specimen, as a maximum.

Osmium.—Osmium is not often specifically determined. As already stated, most of the figures cited as osmium mean simply loss. We can only say that it is usually present, but that, aside from inclusions of iridosmine, it is in small quantity.

Ruthenium.—Ruthenium is not recorded in any analysis of platinum or platiniridium, but it does appear in iridosmine, as is shown by the second table of analyses.

Iridosmine.—Iridosmine mechanically involved may be present in large amounts. Almost all the analyses show some, and the amount ranges from 0.11 as a minimum to 37.30 as a maximum. In platinum from North America and Australia it is more abundant than in the samples from Russia. The maximum of 37.30 was found in a sample from Oregon. It will be of interest to insert at this point a series of analyses of iridosmine itself, because they throw light upon the composition of this mineral as included in native platinum.

Analyses of iridosmine.

	1. Russia.	2. Colombia.	3. Russia.	4. Russia.	5. Borneo.	6. Australia.	7. Colombia.	8. Russia.	9. California.	10. Russia.	11. Russia.	12. Russia.
Ir	77.20	70.40	70.36	64.50	58.27	58.13	57.80	55.24	53.50	46.77	43.94	43.28
Os	21	17.20	23.01	29.90	38.94	33.46	35.10	27.32	43.40	49.34	48.85	40.11
Pt	1.10	.10	.41	2.80	.15	------	------	10.08	------	------	.14	.62
Rh	.50	12.30	4.72	7.50	2.64	3.04	.63	1.50	2.60	3.15	1.65	5.73
Pd	------	------	------	------	------	------	------	Tr.	------	------	------	------
Ru	.20	------	------	------	------	5.22	6.37	------	.50	------	4.68	8.49
Au	------	------	------	------	------	------	------	------	------	------	------	------
Fe	------	------	1.29	1.40	------	------	.10	Tr.	------	.74	.63	.99
Cu	Tr.	------	.21	.90	------	.15	.06	Tr.	------	------	.11	.78
Total	100	100	100	100	100	100	100.06	100	100	100	100	100

NOTES TO TABLE.

1. Russia. Deville and Debray. Annales Chem. et Phys., III, Vol. LVI, p. 449.
2. Colombia, El Choco. Idem.
3. Russia. Idem. Sp. gr. 20.5.
4. Russia. Idem. Sp. gr. 18.8.
5. Borneo. Idem.
6. Australia, undoubtedly New South Wales and from the Richmond or Clarence rivers. Idem.
7. Colombia, El Choco. Idem.
8. Russia. Nijni Tagilsk. Claus. Beiträge zur Chemie der Platinmetalle. Dorpat, 1854. Jahresber. Chemie, 1855, pp. 423, 444, 814, 905.
9. California. Deville and Debray. As under 1.
10. Russia. Berzelius, Poggendorff's Annalen, Vol. XXXII, 1833, p. 232. Sp. gr. 19.386–19.471, Ir. Os.
11. Russia. Deville and Debray. As under 1. Sp. gr. 20.4.
12. Russia. Idem. Sp. gr. 18.9.

The table of analyses brings out very clearly the fact that platinum is extremely subordinate in iridosmine, and may entirely fail. It varies from nothing through a general amount of less than 1 to 10.08 in No. 8, a Russian sample, as a maximum. The iridium varies from 43.28 as a minimum to 77.20 as a maximum. The osmium ranges from 49.34 as a maximum to 17.20 as a minimum. These extreme values do not correspond exactly to the minimum and maximum values of iridium, but it may be stated that in general the low values of osmium accompany high values of iridium, and vice versa. Rhodium is present without exception, and reaches in No. 2, from Colombia, 12.30, as a maximum. These values are pretty well distributed between this amount and 0.50 as a minimum. Palladium, which is universally present in platinum, practically fails in iridosmine, while ruthenium, which fails in platinum, may be present in considerable amounts in iridosmine. No. 12, from Russia, contains 8.49 per cent. Gold fails entirely, and iron and copper are either entirely lacking or insignificant.

Gold.—Gold is frequent in samples from California and Colombia, but in almost all cases it seems to fail in Russian material. When present, it varies from a minimum of 0.20, in No. 10, from Borneo, to 1.50, in No. 16, from Colombia. Presumably, the gold cited in the analyses appears as an alloy, but gold is also known mechanically included with, or plated or welded upon the platinum, as will be more fully described under the minerals which are associated with the nuggets.

Iron.—Iron is mentioned in all the analyses except No. 44, of a Russian sample of platiniridium. In platinum proper its minimum is 4.30, in No. 43, from Oregon. This low percentage is accompanied by a high percentage of iridosmine—37.30. Another sample, No. 41, from Australia, likewise contains but 4.30 of iron; and it has 25 per cent iridosmine. The maximum values in iron are present in the samples with moderate percentages of platinum—69 to 76. The highest figure recorded is 18.93, No. 37, from Russia. As the amount of platinum increases, the iron tends to decrease, but the statements are based chiefly upon Russian material. The curve of iron in the diagram (fig. 1) is very significant. We need, however, for its true estimation, to bear in mind the geographical localities. If one fixes attention upon the Russian samples, whose points are marked with an R, it is evident that the iron increases quite regularly and uniformly from the richest nugget, with 86.50 platinum, to the one with 68.95. Nearly all the points which have been plotted below this curve are based upon analyses from other localities. The iron in the specimens from Colombia is quite uniform, standing in nearly all cases between 7 and 8 per cent. The California samples likewise have comparatively small amounts.

Copper.—Copper was absent or undetermined in No. 7, from Russia,

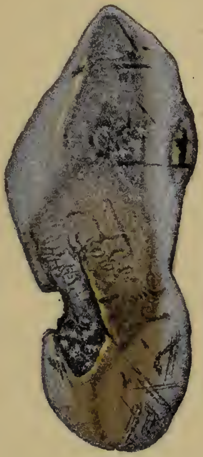
PLATE II.

PLATE II.

(*A*) Nugget of platinum, gold, and chromite, Colombia. × 20 diam.

(*B*) Nugget of platinum, gold, and dolomite or magnesite, Colombia. × 20 diam.

(*C*) Platinum nugget with olivine and octahedral chromite, Tulameen district, British Columbia. × 9 diam.



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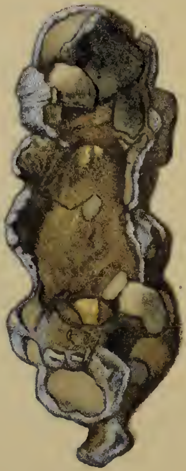

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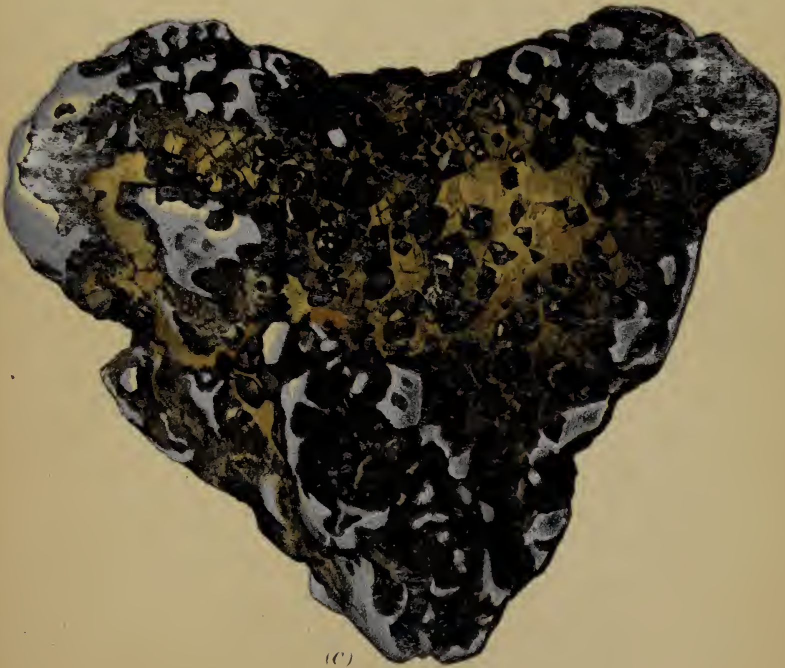

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but it is otherwise invariably present. It ranges from a trace in No. 6, from Colombia, to a maximum of 5.20 in No. 30, from Russia. It is usually less than 1 per cent, although, in looking through the table, a considerable number of analyses will be found above this figure.

Other metals.—Manganese has been recorded in two cases, Nos. 3 and 6, both from Colombia. The amounts, however, are small—0.10 and 0.31, respectively. It probably appears in much the same relation as iron. Lead has been recorded in one from Fifield, New South Wales, but only traces are mentioned. This is No. 27, although the lead is not given in the table. In No. 24, from California, 0.55 per cent lead is mentioned in the original citation with a query. Quicksilver has been recorded in one from California. It is No. 39, and 0.60 per cent is given in the original. Nickel has been reported in platinum from Nijni Tagilsk, by Terreil. In a sample containing 8.18 Fe, 0.75 Ni was determined.[a]

MINERALS ASSOCIATED WITH THE NUGGETS.

It is necessary to discriminate between the minerals which actually form a part of the nuggets and those which are merely associated with them as components of the gravels. Under the former head chromite, olivine, serpentine, pyroxene, mica, and gold have now been discovered.

Chromite.—Chromite is much the commonest of all the foreign minerals which are found attached to the nuggets. Its general relations with the platinum are illustrated by Pl. II, *A*, *B*, and *C*, and Pl. III, *A* and *B*. The nuggets from which the drawings of Pl. III were made came from British Columbia. Those from which Pl. II was prepared are from Russia, Colombia, and British Columbia. The platinum is intermingled with the chromite in such a way that sometimes one mineral and sometimes the other is the host, and there seems to be no question that the two minerals have crystallized together. Sometimes the chromite appears as little octahedrons perched upon the platinum. These are illustrated in Pl. II, *C*, a specimen from British Columbia. The British Columbia nuggets which contain platinum sometimes have a crumbly aspect, suggesting that the grains of chromite are held together by the platinum and have not traveled far. Nuggets with chromite have been observed in Colombia, Russia, British Columbia, and at Plattsburg, N. Y. Nevertheless, nuggets with attached chromite are not particularly common and appear as a small minority in the commercial samples. The chromite is always suggestive of a basic igneous rock as the source from which the nuggets have been derived.

Olivine.—Olivine has been discovered upon a few nuggets from British Columbia. The illustration, Pl. III, *B*, has been drawn from one of a number of thin sections which have been prepared by the writer.

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[a] Comptes rendus, Vol. LXXXII, 1876, p. 1116.

The olivine seems quite abundant upon the fresh nuggets, but when the thin sections are cut it is discovered that the core is platinum and that merely an outside shell of olivine grains adheres to it. The latter grind off with the greatest facility, so that it is very difficult to preserve them for microscopic examination. These attached olivines suggest in the strongest manner a peridotite as the source of the nuggets. Serpentine, quite certainly derived from olivine, has been observed upon a number of Russian specimens and is likewise suggestive of basic igneous rocks as the source of the metal.

Pyroxene.—Upon one thin section of a nugget from British Columbia adhering crystals of pyroxene have been discovered by the writer. They are illustrated by Pl. III, *C*. The pyroxene appears to be common augite. It possesses the usual high extinction angle and the other normal optical properties. Pyroxenites occur near the place of discovery of the nugget, and have probably been the mother rock.

Mica.—Kokscharow has recorded one instance in the Urals in which a platinum scale was found embedded in a mica crystal.[a]

Gold.—Gold has been mentioned in connection with the analysis of platinum, and the remark was there made that the yellow metal was probably alloyed with the platinum in the cases cited. It does, however, occur either mechanically involved with the platinum or plated or welded to it, and in searching over a number of nuggets several have been found in which the gold formed an auxiliary mineral. They have been obtained chiefly from Colombian samples, and two small ones have been selected for illustration, as shown by Pl. II, *A* and *B*. Pl. II, *B*, is of special interest, as it shows gold, platinum, and dolomite or magnesite on the same piece. The white mineral effervesces feebly with warm nitric acid. A number of others, which are small, have, however, likewise been studied. Some were obtained in British Columbia and some in Russia.

So far as known to the writer, no other minerals have been actually found forming a part of the nuggets except iridosmine. It is possible that magnetite may at times have been taken for chromite. The rusty crust on some nuggets may be a mineral not mentioned above.

Associated minerals in the gravels.—Minerals associated with the platinum nuggets are the familiar ones which have been so frequently studied in connection with the much more abundant gold-bearing placers. The commonest ones are gold, silver, copper, iridosmine, and other members of the platinum group, chromite, magnetite, menaccanite, garnet, zircon, rutile, small diamonds, topaz, quartz, cassiterite, pyrite, and epidote. Almost any mineral of high specific gravity which is commonly met in rocks may be expected to appear in the pannings. Purchasers of platinum dust also occasionally meet bits of lead, which appear to be shot that have been fired from a gun. It is possible that they have gotten into the gravels after having been used by some hunter. It is at least charitable to attribute this source to the lead.

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[a] Materialen zur Mineralogie Russlands, Vol. V, p. 371.

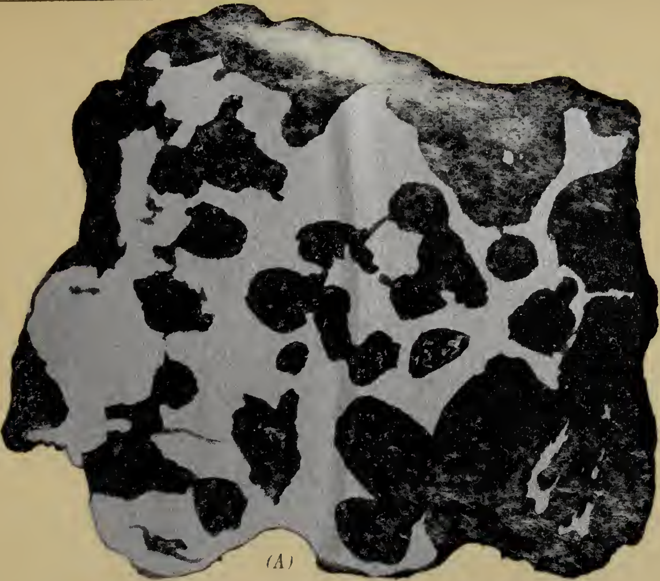
PLATE III.

PLATE III.

(*A*) Polished nugget of platinum and chromite, Tulameen River, British Columbia. × 10 diam.

(*B*) Thin section of nugget of platinum, chromite, and olivine, Tulameen River. × 14 diam.

(*C*) Thin section of nugget of platinum and pyroxene, Tulameen River. × 15 diam.



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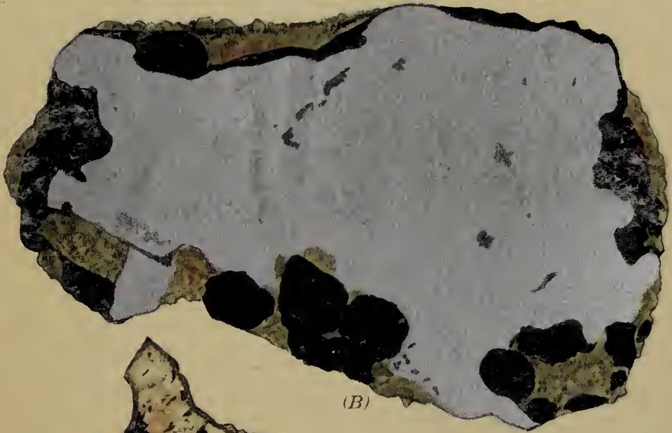

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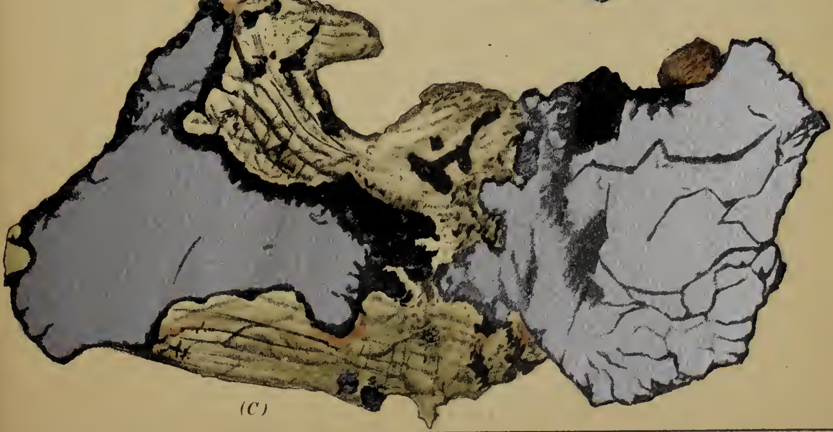

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PLATINUM IN COUNTRY ROCK.

The greatest interest has been felt by all familiar with the subject in the discovery of platinum in the mother rock, and a number of observers have endeavored to trace the nuggets back to their sources. In four or five cases this has been accomplished.

Urals.—The first person to succeed, or to believe that he succeeded, was Dr. Moritz von Engelhardt, who was professor of mineralogy in the University of Dorpat. In the early part of the preceding century it seems to have been a not infrequent custom among several of the European governments to commission a scientific man to travel with a view to investigating the mineralogical resources of some particular region. Gustav Rose's famous trip through the Urals and the Altai Mountains may be cited as an example. In a somewhat similar way Professor von Engelhardt was sent in 1826 by his university to trace, if possible, the gold and platinum of the Urals to their sources. His results were published in a small pamphlet of 44 pages, in Riga, in 1828.[a] Professor von Engelhardt studied the gold and platinum at Nijni Tagilsk and at Nijni Turinsk. On his return from Nijni Turinsk to Nijni Tagilsk he discovered, near the village of Laja and upon the bank of a neighboring brook, weathered porphyritic rocks which furnished superficial deposits very similar to those in the platinum mines at Nijni Turinsk. Although they were deeply weathered, he was able finally to secure some specimens of fresh material. In his description he states that they exhibited a part that resembled greenstone and a part like syenite, consisting of hornblende and reddish white feldspar, with some imperfect crystals and rounded nests of individual feldspar. The outer surfaces of the bowlders and of the cracks were coated with brown ocher and black oxide of manganese, but toward the center the feldspar crystals became white and kaolinized. The larger nests of feldspar seemed like spheroids of feldspar-porphyry. The remaining finely crystalline base was a mixture of hornblende and feldspar and was brown and stained with iron. The binding material of the bowlders was feeble. It resembled brown jasper, or brown clay ironstone, and appeared in rounded grains and angular bits.

In places the rock was entirely black and full of fine pores. The outer portion could be knocked off in curving shells, so that the observer might imagine that he had a slag before him if it were not that the core made it possible for him to recognize the porphyry. By a careful examination of these specimens Professor von Engelhardt was enabled with a lens to discover in the fresh porphyry shining metallic points resembling the platinum which was washed from the sands at Nijni Turinsk. These were submitted to a very careful chemical investigation by his colleague, Professor Osann, who separated a pair of the little grains and identified them as platinum. The granules obtained from the "syenitic greenstone porphyry" were rounded, with little elevations and depressions. The depressions were largely stained black, while the elevations were tin white and strongly metallic. A few little grains, which were a mixture of gold and platinum, possessed a grayish yellow color. Each platinum grain was inclosed in limonite or brown ocher, which also coated the small pores even of the fresh rock. Dr. Engelhardt states that probably the numerous, larger pores of the weathered porphyry had likewise contained grains of platinum, which were freed when the rock fell to pieces.[a] This discovery is extremely interesting, because it indicates the presence of platinum in a feldspathic rock and not in a peridotite or serpentine, or in an especially basic type. In this connection a comparison with the results obtained by the writer in British Columbia will be of interest.

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[a] This little work is not easily accessible in America, but a copy is now in the possession of the writer.

A few years after Professor von Engelhardt made his discovery, Gustav Rose visited Dorpat in connection with his famous trip through the Urals. Rose records his great desire to discover platinum in the country rock and the interest which he felt in Dr. Engelhardt's investigations. He visited the locality and had no difficulty in collecting similar samples of rock, and, on his return through Dorpat he procured additional material from the same lot upon which Dr. Engelhardt had made his determinations. Rose was, however, unable to verify Engelhardt's discoveries and found no platinum in any specimen of the rock.[b] These results would indicate that the platinum is sparsely and irregularly distributed, an experience which has been met by others. Professor von Engelhardt's observations are so well fortified by chemical tests on the part of his colleague, Professor Osann, that one would hesitate to question them.

Interest has been felt by geologists everywhere in the announcement that platinum had been again discovered within the last few years in the country rock of the Urals, but as the published descriptions have been in Russian they are not easily accessible to English-speaking people. In the sketch of platinum in Russia which is subsequently given, a translation of the most important paper will be found. In this place it will be merely remarked that in a paper by Prof. A. Inostranzeff, read before the St. Petersburg Society of Naturalists in 1892, and entitled Primary Deposits of Platinum in the Urals, a description is given of the most recent discovery. Daubrée had identified platinum by assay in bowlders of peridotite from the vicinity of Nijni Tagilsk in 1876. In the summer of 1892 Professor Inostranzeff visited this district and recognized the fact that the gravels containing the platinum had been derived from Soloviev Mountain, which was known to consist chiefly of serpentine and peridotites. About that time the story spread that a laborer had been seen mining by himself. When he was finally located it was found that he had blasted into the rock of the mountain and had followed up a pocket some 35 cm. in diameter. The rock which had been mined appears to be an altered olivine rock which has passed even beyond the stage of serpentine. It consists of chromic iron, serpentine, and dolomite, and seems to be somewhat shattered, because its pieces are cemented together by opaline silica. When this shattered and more or less decomposed rock was crushed and panned it yielded colors of platinum of an exceedingly fine character, but they were distinctly recognized. On assay of 500 grams of the crushed rock, taken in several samples, platinum was found to be present to an amount of 0.0107 per cent, or about 3 ounces to the ton. This platinum contained no iridium.

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[a] Die Lagerstätte des Goldes und Platin im Ural-Gebirge, by Moritz von Engelhardt, Riga, 1828, pp. 30-31.

[b] Reise nach dem Ural, etc., by Gustav Rose, Vol. I, p. 340.

There is record of the presence of platinum in the gold-bearing quartz veins at Beresovsk, Russia.[a]

Colombia.—As early as 1826 Boussingault announced in a letter to Humboldt that he had obtained scales of platinum upon panning the ferruginous outcrop of a vein which occurred at Santa Rosa, near Medellin, province of Antioquia, Colombia. Further details are given in the subsequent description of platinum in Colombia. By a misunderstanding of the records this locality is sometimes mentioned as being in Brazil, as, for example, in Dana's Mineralogy.

Mexico.—In 1875 Sandberger announced that he had detected platinum in some pseudomorphs of limonite after pyrite from an unrecorded locality in Mexico.[b]

Brazil.—In various papers on platinum the statement has been recorded that the metal has been discovered in place in Brazil. C. F. Hartt states, on page 448 of his Geology and Physical Geography of Brazil, that platinum is found in quartz veins which cut syenitic gneiss. The veins are called the Boa-Esperança. Hartt also states, on page 542, that the gold of Gongo Seco, in the province of Minas Geraes, contains palladium, and in a footnote he states further that the gold of Brazil is always alloyed with silver and occasionally with platinum, and that it may contain iron. Iridium and iridosmine are found in the gold washings of Minas.

NOTE.—Since this bulletin was written, the writer, with the cooperation of Dr. David T. Day and Mr. A. W. Johnston, has accumulated proof of the presence of platinum in pyrite and in quartz veins from several American localities. The notes are in preparation for publication.

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[a] Phillips's Ore Deposits, 2d edition, pp. 545-546.

[b] Neues Jahrbuch, 1875, p. 625.

Platinum was observed and reported to be a constituent of copper ores very early in the nineteenth century. In the series of samples of tetrahedrite, or some mineral resembling it, which was sent from Guadalcanal, Spain, to Paris in 1806, the French chemist Vauquelin discovered platinum in amounts varying from a trace to as much as 10 per cent. The ore came from veins, and the platinum no doubt was found in place. Additional details are given regarding the local geology in the notes upon platinum in Spain.[a]

France.—Berthier and Becquerel have detected it in limonite from the departments of Charente and Deux Sevres, France.[b]

A very interesting case of the occurrence of platinum in tetrahedrite and in bournonite in certain limestones of the western Alps has been described by E. Gueymard,[c] a French mining engineer, long a resident of the region. The platinum varied from nothing to amounts that could be weighed. The majority of the samples, however, failed to afford it. (Details are subsequently given under "France," p. 65.) The occurrence is of great interest, and, taken together with the results of Vauquelin and the known presence of platinum in the nickel-copper ores of Sudbury, makes it desirable to scrutinize this type of ore with great care. It is quite possible that in the past small amounts of platinum have been overlooked, which, with modern electrolytic methods of separation, could be profitably obtained, and there is reason to believe that occurrences of this sort are more promising for economic treatment than are those of native platinum sparsely distributed in otherwise barren rock. The failure of platinum to amalgamate makes its metallurgical recovery much more difficult than that of gold, and its extraction through the medium of copper furnishes one of the most promising lines of attack.[d]

Germany.—In this connection it is interesting to note its detection by Maximilian, Duke of Leuchtenberg, in 1847, in the black sand which remained at the anode when copper sulphate was electrolytically treated.[e] Platinum has been discovered in amounts that admitted of separation in old silver coins which circulated in Germany and which had derived their silver from silver-copper ores.[f]

H. Rössler has described the methods of separating the platinum from the silver which was obtained from the mines at Commern and Mechernich. These famous ore bodies consist of beds of Lower Triassic sandstone, which are impregnated with nodules of galena or cerussite, and more rarely of copper carbonate. While the silver was probably derived from the galena, and while the platinum may have come from the same source, yet the subordinate presence of copper casts a little uncertainty over the original association of the platinum as between it and the lead.[a]

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[a] Vauquelin, Annales de Chemie, Vol. LX, 1806, p. 317. Journal für die Chemie, Physik und Mineralogie, Vol. II, 4, 1806, p. 694. Leonhard's Jahrbuch, Vol. II, p. 311.

[b] Poggendorff's Annalen, Vol. XXXI, 1834, p. 590.

[c] Comptes rendus, Vol. XXIX, 1847, p. 814.

[d] It is interesting to observe that eight months after this paragraph was written platinum, in the form of included sperrylite, was announced in the ore of the Rambler Copper Mine, Wyoming (W. C. Knight, Eng. and Min. Jour., Dec. 28, 1901, p. 845; Wells and Penfield, Am. Jour. Sci., Feb., 1902, p. 95).

[e] Bull. Acad. Sci. St. Petersburg, Vol. VI, 1848, p. 129. Dingler's Polytech. Journal, Vol. XXXV, 1847, p. 106.

[f] M. Pettenkoffer, Poggendorff's Annalen, Vol. LXXIV, 1848, p. 316.

Platinum in association or combination with galena has been reported several times. Details of such an occurrence in France that could not be verified will be found under "France," p. 65. Another from Algiers has been reported, but further corroboration is desirable.[b] (See p. 82.)

Pennsylvania.—In 1852 Dr. F. A. Genth announced that he had detected platinum in the assay of a clay slate containing pyrite, chalcopyrite, and galena in Lancaster County, Pa. He likewise discovered traces of platinum and silver in ilmenite from a mica-schist in the same place.[c] In later years platinum has been detected by A. W. Johnston in variable but sometimes considerable amounts, of which the details are given later, not far from Boyertown, along the border of Berks and Montgomery counties, Pa. The mother rock is a black Triassic shale. A black dioritic gneiss from eastern Pennsylvania has afforded appreciable assays.

Arizona.—Shales have been brought from Arizona, from some place in the vicinity of the Grand Canyon of the Colorado, which on assay have yielded weighable amounts of platinum. (See under "Arizona," p. 51.)

Ontario.—In 1888 F. L. Sperry noted small, shining, metallic crystals in the concentrates obtained from the Vermillion gold mine, a few miles west of Sudbury, Ontario, which was based upon a quartz vein cutting rusty diorite. When these crystals were investigated by Messrs. Wells and Penfield, of New Haven, they were found to be arsenide of platinum ($PtAs_2$), the first compound of platinum with a nonmetallic substance which has been recognized. They named the mineral "sperrylite," and it has since been discovered in many of the nickel mines of Sudbury. It seems to favor the chalcopyrite rather than the pyrrhotite, but Clarke and Catlett have shown that the sulphide of iron and nickel, polydymite, likewise contains considerable proportions of platinum. These discoveries, therefore, revealed the presence of platinum in place and in association with ores which are usually regarded as of igneous origin, and which are known to occur in basic igneous rocks.[d] Full descriptions, with citations of the literature bearing on the subject, will be found subsequently under "Canada," p. 38.

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[a] H. Rössler, Liebig's Annalen, Vol. CLXXX, 1876, p. 240.

[b] Comptes rendus, Vol. VII, 1838, p. 246.

[c] F. A. Genth, Pharm. Centralblatt, 1852, p. 72.

[d] Microscopic investigations now being made by one of the writer's students, Mr. C. W. Dickson, upon Sudbury ores, cast much doubt upon the igneous origin of the sulphides, and indicate a replacement of ferromagnesian silicates.

Wyoming.—Platinum has been recently reported by W. C. Knight as a constituent of the copper ores, and more particularly of the covellite, of the Rambler copper mines, about 60 miles south of Laramie. Wells and Penfield have detected sperrylite in the covellite.[a]

New South Wales.—In 1889 attention was directed to certain ferruginous materials resembling gossan which outcropped in the vicinity of Broken Hill, in the extreme western portion of New South Wales, Australia. When this ferruginous cap was assayed it was found to contain platinum, even up to several ounces per ton. The cappings are quite widely distributed in the region, and rest upon more or less altered metamorphic rocks, embracing gneisses, quartzites, and schists of Lower Silurian age. Shafts have been sunk to shallow depths, and have revealed the fact that iron greatly diminishes, and clays and kaolin come in, until unaltered rock is encountered. The clays also gave assays for platinum. It is thought by J. B. Jaquet that the iron caps are due to uprising springs, which have likewise introduced the platinum.

North Carolina.—In 1898 it was announced that sperrylite had been discovered in North Carolina as early as 1894 by W. E. Hidden. Later on Messrs. Hidden and Pratt followed up the sperrylite and associated minerals, until they definitely located them in a ledge of rock upon the top of Mason Mountain, Macon County. The rock consists of garnet of the variety rhodolite, and of biotite, together with considerable iron sulphides. Pannings of the surface soil yielded sperrylite.

British Columbia.—In the summer of 1900 A. W. Johnston and the writer succeeded in demonstrating the presence of platinum in the peridotite of the Tulameen River, British Columbia, and in a neighboring granite. In the former the platinum favors asbestiform streaks, which appear to be present along lines of faulting in the peridotite. In the granite the platinum was discovered along a crushed belt which was richly stained with chlorite. More details are subsequently given under "British Columbia" (p. 38).

Résumé.—From this review of the discoveries which have been hitherto made it is evident that platinum is not exclusively limited to the olivine rocks, nor indeed to the igneous rocks and the placers, but that it does appear sometimes in veins with other metals, especially copper. It would follow that the platinum migrates in solution. It or its arsenide probably is soluble in some form of solutions which involves copper. Commercially speaking, however, the amount which has thus far been detected is small.

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[a] W. C. Knight, Eng. and Min. Jour., Dec. 28, 1901; Wells and Penfield, Am. Jour. Sci., Feb., 1902, p. 95.

PLATINUM IN AUSTRALIAN COAL.

A most extraordinary case has been recorded of the presence of the metals of the platinum group in the ash of certain Australian coals (exact locality not mentioned), along with vanadium.[a] The coal, as analyzed by Messrs. Thirkell & Co., of London, yielded the following:

Carbon	65.2	Water at 100° C	0.7
Hydrogen	4.6	Ash	1.7
Oxygen	21.8		
Nitrogen	1.9	Total	99.7
Sulphur	3.8		

The ash yielded the results under No. 1. No. 2 is a second sample.

	No. 1.	No. 2.
Vanadium	25.1	2.90
Platinum metals	3.6	.23
Oxygen with above	44.0	5.10
Sandy and earthy matters	27.3	91.77
Total	100.0	100.00

This means in the original coal a little over 144 troy ounces of vanadium and 20⅗ ounces of the platinum metals per long ton of coal, and makes the coal the richest crude platinum ore yet assayed.[b] No. 2 is an analysis of the ash of the coal in bulk. It implies only an eighth as much vanadium and a fifteenth as much of the platinum metals per ton of coal, if the ash were the same percentage of the coal as before; but its percentage is not given in the citation. The amounts of vanadium and platinum which are given in the citation are over 146 ounces of vanadium and more than 11 ounces of the platinum metals per ton of coal, which, if correct, would imply a high-ash coal.

Coals whose ash is rich in vanadium are known in Argentina and in Peru, but no mention of platinum has been made in connection with them.

PLATINUM IN METEORITES.

In January, 1899, John M. Davidson, of Rochester, N. Y., announced that he had identified platinum in two meteorites. Of the Coahuila meteorite, 608.6 grams were tested and yielded 0.014 gram of platinum. Of this, 0.0015 gram was insoluble and gave indications of iridium. Of the Toluca meteorite, 464 grams afforded a little platinum, with indications of iridium.[c] Palladium was earlier announced in an Italian meteorite.[d]

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[a] Seventeenth Ann. Rept. U. S. Geol. Survey, Part III, p. 282.

[b] This would be 124 ounces of vanadium and 17⅜ ounces of the platinum metals per short ton.

[c] Platinum and iridium in meteoric iron, by John M. Davidson: Am. Jour. Sci., Jan., 1899, p. 4.

[d] G. Troltarelli, Jour. Chemical Society, Vol. LX, 1891, p. 533.

PLATINUM IN THE SUN.

Platinum has been detected by the spectroscope in the sun.[a]

GENERAL PAPERS ON PLATINUM.

BULLMAN, Charles. The platinum group of metals: The Mineral Industry, Vol. I, 1893, p. 373.

BREITHAUPT. On the varieties of native platinum: Poggendorff's Annalen, Vol. VIII, 1826, p. 500.

DAUBRÉE, A. Experiences sur l'imitation artificielle du platine natif magnetipolaire: Comptes rendus, Vol. LXXX, 1875. p. 526.

DEVILLE and DEBRAY. On the chemistry and metallurgy of the platinum group: Annales Chim. Phys., 3d series, Vol. LVI, p. 449.

FRÉMY, E. Nouvelles recherches sur les métaux qui accompagnent le platine dans sa mine: Comptes rendus, Vol. XXXVIII, p. 1008. Erdmann's Jour. f. prakt. Chem., Vol. LXII, p. 340.

HOWE, James Lewis. Bibliography of the metals of the platinum group: Smithsonian Miscellaneous Collections, No. 1084. Washington, 1897. This is the most complete work of reference on the platinum group of metals.

MILLER, E. H. The assay of platinum: School of Mines Quarterly, Vol. XVII, 1895, p. 26.

VOGT, J. H. L. On the processes of crystallization in eruptive rocks: Zeitsch. f. prakt. Geologie, July, 1893, pp. 267–268; October, 1894, p. 397.

REVIEW OF LOCALITIES WHERE METALS OF THE PLATINUM GROUP HAVE BEEN DISCOVERED.

NORTH AMERICA.

CANADA.

QUEBEC.

About the middle of the last century there was considerable interest in the gold-bearing placers which had been discovered along the south bank of the St. Lawrence River in what is known as the Eastern Townships of Quebec. A few minute scales and grains of platinum and iridosmine were noted by T. S. Hunt in the gold of the Rivière du Loup. It is also stated that these minerals are likewise found with the gold of the Rivière des Plantes.[b]

The source of this platinum has not been discovered, but it is well known to geologists that serpentine occurs along the border between Quebec and Vermont and New Hampshire. It is possible, however, that it may lie too far to the west to have furnished the nuggets. The glacial drift, moreover, casts some uncertainty over the exact source. Here reference may be made to the nugget which was found at Plattsburg, N. Y., regarding which a note is subsequently made under New York (p. 57).

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[a] J. N. Lockyer, Proc. Roy. Soc. Lond., Vol. XXVII, 1878, p. 279; Hutchins and Holden, Proc. Am. Acad. Sci., Vol. XXIII, 1887, p. 14; Am. Jour. Sci., Vol. XXXIV, 1887, p. 451.

[b] T. S. Hunt, Geol. Survey Canada, 1851-52, p. 120.

ONTARIO.

In 1889 the announcement was made by Messrs. Wells and Penfield that they had identified the arsenide of platinum ($PtAs_2$) as a natural mineral. It had been collected by Mr. F. L. Sperry from the heavy concentrates of a gold ore taken from the Vermillion mine, which is situated a few miles west of Sudbury, in the western part of Ontario. At this mine there is a quartz vein carrying gold, which cuts across a belt of dioritic rock containing chalcopyrite and nickel-bearing pyrrhotite.

Professor Wells named the new mineral sperrylite, after its discoverer. The greatest interest was felt by all scientific people in this discovery, because sperrylite is the first and only natural compound of platinum with a nonmetallic substance which has been found. Since the first announcement it has been recognized that sperrylite or some other form of platinum is generally present in the nickel-copper ores of the Sudbury region. Small traces of the platinum metals have been detected in the mattes and in the nickel oxide furnished by these mines. Clarke and Catlett have likewise shown by assay that platinum is present in polydymite, a nickel-iron sulphide which occurs in the mines. The observations, however, of T. S. Walker have indicated that the home of the sperrylite is in the chalcopyrite rather than in the pyrrhotite, because when the surface decomposition products of the Vermillion ore body were panned by him he obtained in the heavy residues sperrylite, chalcopyrite, pyrrhotite, and other iron-nickel sulphides. On careful examination sperrylite was observed embedded in the chalcopyrite, but not in the pyrrhotite. Mr. Walker also states that, while traces of the platinum metals occur in all the Sudbury mines, the richest assays are obtained from those whose yield is high in copper, and that very little appears in those which are poor in this metal. It is a curious fact that the analyses of the sperrylite do not indicate the presence of iridium, although this metal is found in the assays of the ores. It must therefore be present in them in some other form than sperrylite.

In the nickel-copper mattes which are exported there is about 1 troy ounce of platinum to each 1,000 pounds avoirdupois of nickel. Palladium is also present to an amount of about 2 ounces palladium to each 3 ounces of platinum.[a]

It is well known to all who are familiar with the literature of ore deposits that the nickel-copper ores of Sudbury occur along the outer edges of igneous intrusions which seem to have been originally norites. Where associated with the ores, however, the rocks are now diorites, the pyroxene having been changed to hornblende.

Nearly all observers who have visited the mines have reached the conclusion that the ores are of igneous origin and that they were brought into their present position with the igneous rock in which they occur. As regards the platinum, these views coincide with the belief that in its original home this metal most frequently occurs in association with olivine as a true igneous mineral in the peridotites, even though no olivine has ever been found in the Sudbury norite-diorite. But it is only fair to state that some authorities, notably F. Pošepny and S. F. Emmons, have felt that there were objections to the view that the Sudbury ores were of igneous origin. In the citations below a list of papers bearing upon the platinum is given, and besides these a few others upon the general geology of the nickel-copper ores.[a] For the general geology of the Sudbury district, see the Geological Survey of Canada, New Series, Vol. V, Part I, Report F.

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[a] The Mineral Industry, Vol. VII, 1898, p. 569.

Attention may at this point be directed to the occurrence of sperrylite in North Carolina, which is subsequently described (p. 59).

In connection with a careful chemical and geological investigation of certain magnetic iron ores from eastern Ontario, F. J. Pope made some careful assays for platinum. As certain of these ores were igneous in their origin and were derived from basic rocks, some hope was entertained that traces of platinum might be discovered in them. None, however, were found.[b]

BRITISH COLUMBIA.

Platinum has been obtained in commercial quantities in connection with the gold washings of southwestern British Columbia, and this source has proved to be the most productive of all thus far developed upon the North American Continent. When the California washings began to fall off, the gold seekers penetrated the mountains of the northwest, and much interest was felt in British Columbia as early as 1861. Some prospecting was done on the Similkameen River. The Similkameen forks into two branches at the town of Princeton, which lies about 30 or 40 miles north of the international boundary on the east side of the Cascade Mountains. In the early days these two branches were called the South and North forks, but later the North Fork received the name Tulameen. The gold washings in 1861 and subsequent years were not extensively developed, although from time to time parties of Chinese worked them. Almost from the start it was recognized that platinum occurred with the gold, but not

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[a] Clarke, F. W., and Catlett, Charles. A platiniferous nickel ore from Canada: Bull. U. S. Geol. Survey No. 64, p. 21. Am. Jour. Sci., 3d series, Vol. XXXVII, p. 372.

Emmens, S. H. The Mineral Industry, Vol. I, 1892, p. 377.

Foullon, H. B. von. Ueber einige Nickelerzvorkommen: Jahrbuch d. k. k. geol. Reichsanstalt, 1892, Vol. XLII p. 301.

Garnier, J. Mines du nickel, cuivre, et platine du district de Sudbury: Mémoires de la Société des Ingenieurs Civile, Paris, March, 1891.

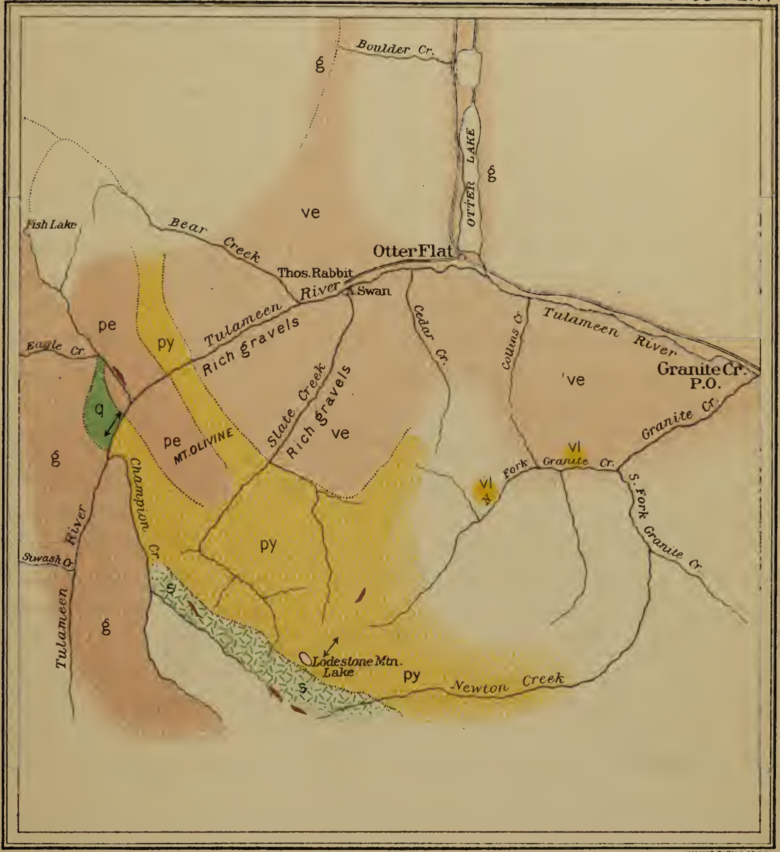
Merritt, W. H. Trans. Am. Inst. Min. Eng., Vol. XXIV., p. 755.

Penfield, S. L. Crystalline form of sperrylite: Am. Jour. Sci., 1889, p. 71.

Walker, T. L. Notes on sperrylite: Am. Jour. Sci., Feb., 1896, p. 110.

Wells, H. L. Sperrylite, a new mineral: Am. Jour. Sci., Jan., 1889, p. 67.

[b] Investigation of magnetic iron ores from eastern Ontario, by F. J. Pope: Trans. Am. Inst. Min. Eng., Vol. XXIX, p. 402.



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GEOLOGICAL MAP OF THE TULAMEEN PLATINUM REGION, BRITISH COLUMBIA

BY

J. F. KEMP

Scale

2 1 0 2 4 MILES

LEGEND

Volcanics

vl Later Miocene Rhyolite and basalt

ve Earlier Miocene

s Green schist

q Quartzite and schists

pe Peridotite

py Pyroxenite-syenite

Dikes Rhyolite and diabase

.... Boundaries approximately accurate

↗ Glacial striae

g Granite

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until fifteen or sixteen years later was it saved. The accompanying map, Pl. IV, will serve to give the reader the geographical location of the district, and the later geological description will make clear the relations of the platinum.[a] In 1885 gold was observed in the gravels of Granite Creek, a tributary of the Tulameen, some 12 miles above its junction with the Similkameen.

Prospectors rushed into the district and washed the gravels not only of this creek but of the old bars on the Tulameen which had received attention as early as 1862. For several years the activity was considerable, and as much as $383,000 worth of gold is accredited to Granite Creek from 1885 to 1888. It had been recognized in 1862 that the gravels of the Tulameen yielded pay as far as Eagle Creek, which enters the Tulameen from the north, about 12 miles above Granite Creek, and during the later gold washing the richest platinum ground was found to begin at Eagle Creek and to extend downstream. Platinum also bore a high proportion to gold in Slate Creek, a tributary which enters the Tulameen from the south, about 8 miles above Granite Creek. The platinum in instances attained a ratio of 1:3 as compared with the gold. From these upper waters of the Tulameen, beginning at Eagle Creek and passing downstream, the relative amount of platinum gradually decreases, and while it is found in Granite Creek and in all the other placers of the drainage system of the Tulameen and Similkameen rivers, it nevertheless decreases in amount with the distance from Eagle Creek and the headwaters of the Slate. Printed descriptions of the geology of this district are few. Dr. George M. Dawson visited it in 1887, and as a result of his trip gave some valuable notes upon the mineral resources as well as the local geology in the report of the Canadian Geological Survey for 1887–88, Part R. Much light is also cast upon the local geology by the very valuable work of Dr. George M. Dawson upon the Kamloops map sheet, which lies about 50 miles to the north.[b] Some further notes upon the resources of the district will be found in a recent paper by W. J. Waterman.[c] A scale map with an outline geological section is given. During the summer of 1900 the writer spent nearly three months in the district investigating the geology of platinum along the Tulameen, and through the courtesy of the S. S. White Dental Manufacturing Company is permitted to contribute the following results:

As regards platinum, the area of chief interest is in the valley of Slate Creek and along the Tulameen River, below Eagle Creek. As will be seen by the accompanying map, which is roughly accurate for this region, a great dike of peridotite crosses the Tulameen at its junction with Eagle Creek, and extends in a general direction a little west of north as a huge mountain ridge. It runs to the south, reaching into the headwaters of Slate Creek, and constituting the highest summit of this divide. For convenience of reference the writer has called this summit Mount Olivine. Although the exposures are nearly all concealed by heavy sands and gravels in the upper waters of Slate Creek, the peridotite does not seem to extend farther in this direction, but it is cut off by a rock called pyroxenite on the map (Pl. IV). It is a curious fact that the pyroxenite also borders the peridotite on the east and likewise on the west, south of the Tulameen. To the southeast, however, the pyroxenite shades into syenitic varieties, which contain very considerable proportions of unstriated feldspar. Just above Eagle Creek, and on the northwest bank of the Tulameen, a small area of schists and quartzites more or less penetrated by dikes of porphyries is met. The relations of these rocks are obscure. Still farther to the west the whole country for a long distance consists of granite, and the granite has been again observed at the headwaters of Boulder Creek on the north. It presumably swings around from Fish Lake to Boulder Creek, and constitutes the intervening country at the headwaters of Bear Creek. The same granite appears along both shores of Otter Lake, and is therefore a very important member of the local geology on the northern and western side of the Tulameen. The pyroxenite is succeeded on the east by enormous masses of volcanic rocks of a general andesitic character, which appear to be the same as Dawson's Earlier Miocene volcanics, as described in the report on the Kamloops sheet. These volcanics are the most extensive formation in this central area, and they serve to conceal the older rocks. They have been somewhat compressed and sheared, and have evidently passed through fairly severe metamorphism. In the upper waters of the north fork of Granite Creek basalts and what appeared to be rhyolite were observed, which lack this metamorphism and which seem to correspond to Dawson's Later Miocene volcanics. At some point on the headwaters of Cedar Creek coals have recently been located, which are probably of Miocene age, corresponding to the Tranquille beds of Dawson. They have, however, been so altered as to possess coking properties. The writer observed Miocene float to the south of this region, but did not visit the coal exposures. On the southwestern border of the pyroxenite, at the headwaters of Slate Creek, a belt of green schists appears, which extends for several miles along the headwaters of Champion Creek. The actual contact of the pyroxenite and the schist is visible in the mountain region just to the west of the source of Slate Creek, but the two are so mashed together that it was impossible to determine which is the older. No contact metamorphism could be observed in the schist, and the writer

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[a] Reference to the early discoveries on the Similkameen will be found in the reports of the Canadian Geological Survey, 1862, p. 127; 1877–78, pp. 63B and 156B.

[b] Report on the geology of the Kamloops map sheet, by George M. Dawson: Geol. Survey of Canada, Vol. VII, Part B. The present writer is much indebted to the late Dr. Dawson for personal advice.

[c] Economic geology in the Similkameen district, by W. J. Waterman: British Columbia Mining Record, Vancouver, November, 1900 p. 411. A few notes at an earlier date are given by J. T Donald in Engineering and Mining Journal, March 19, 1892, p. 327.

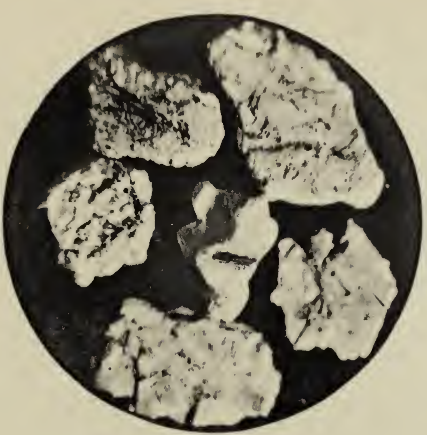
PLATE V.

PLATE V.

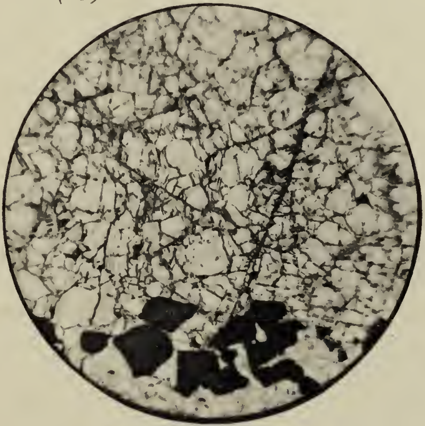
(*A*) Iridosmine, Slatousk, Urals. × 35 diam.

(*B*) Peridotite containing olivine and chromite, Tulameen River, British Columbia. × 70 diam.

(*C*) Serpentinized peridotite, Tulameen River. × 70 diam.



(A)



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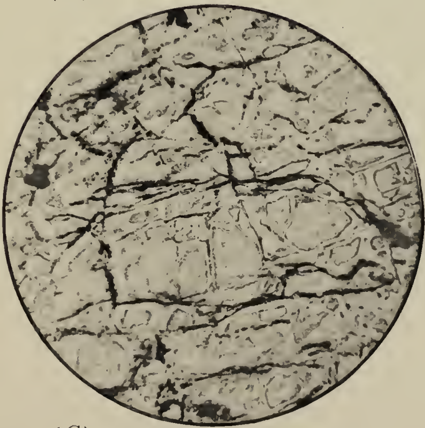

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was unable to decide whether it is later or earlier than the pyroxenite. Several dikes of later eruptive rocks have penetrated all these older forms, and, as they show but slight traces of metamorphism, they are probably later than the Earlier Miocene volcanics. They are chiefly rhyolites or quartz-porphyries, but to the northeast of Lodestone Mountain and near the old Brigade trail a large dike of diabase was observed. This whole region has been extensively glaciated. Striæ were noted in two cases, one of which was along the Tulameen just above Eagle Creek, where the direction of the valley is somewhat east of north. The striations follow the trend of the valley and may have been influenced by it. A number of others were observed upon the summit of Lodestone Mountain, where the topography must have had less influence. They were closely parallel, however, to the previous ones.

An extensive and complex series of terraces may be also observed along the streams, and it is evident that the region has undergone a number of elevations and depressions in Pleistocene time. Along the Tulameen there is an almost continuous bench, of which now only stumps remain, and at Granite Creek post-office a number can be recognized up to 200 or 300 feet above the river. Opposite the mouth of Slate Creek a bench, which is washed in the hydraulic works of Alexander Swan, reaches an altitude by aneroid above the Tulameen of 330 feet. It causes Slate Creek to turn to the west and to enter the Tulameen in a direction against the current of the latter. The terrace evidently buries an old outlet of Slate Creek, which has been partially exposed by the hydraulic operations. A similar high bench of gravels has turned Champion Creek westward. It is possible that the presence of ice in the valley of the Tulameen is responsible for the deposition of these bars. Similar phenomena are not found on the north side. It may be added that the valley of the Tulameen and its branch creeks is a very narrow and steep one, and the topography gives every evidence of recent development. In its general character this entire country, as has been well set forth by Dr. George M. Dawson, is a plateau which has been deeply dissected by the present streams. The drainage has not been so long in operation as to smooth off the divides. The banks are yet so steep as to make zigzag trails a necessity.

The rocks which are of chief interest in connection with the platinum are the peridotite, the pyroxenite, and the granite. All petrographic details will be particularly limited to these.

MINERALOGY OF THE NUGGETS.

A careful search through large quantities of Tulameen platinum has revealed a considerable number of nuggets which contain chromite. A few have particles of olivine still adhering to them, and before the examination in the field was taken up it was expected that olivine rocks would be found in the region, although in Dr. Dawson's reconnaissance none were found, and the statement was made in his report that apparently none existed. It may be added that since the writer's return a nugget has likewise been discovered with adhering pyroxene, as has been stated on page 26. This association, as well as that with chromite and with olivine, is illustrated on Pl. III. When, however, the country was carefully observed along the upper waters of Slate Creek it was at once discovered that the great dike of peridotite, with its flanking pyroxenite, was present.

Peridotite.—The peridotite is an extremely interesting rock. It is of the variety dunite, and contains, so far as the writer's observations have gone, no other minerals than olivine and chromite. Some secondary serpentine and some amianthus can be found, and occasionally a little pyrite; but in its fresh condition the rock appears to be practically pure olivine, with occasionally a little chromite. Pl. V, *A* and *B*, will serve to illustrate it, and the following analysis, made in the laboratory of the United States Geological Survey by W. F. Hillebrand, indicates its composition:

Analysis of peridotite (variety dunite) from Eagle Creek, British Columbia.

SiO_2	38.40	$H_2O+110°$	4.11
Al_2O_3	.29	CO_2	1.10
Fe_2O_3	3.42	P_2O_5	Tr.
FeO	6.69	S	.06
MgO	45.23	Cr_2O_3	.07
CaO	.35	NiO	.10
Na_2O,K_2O	.08	MnO	.24
$H_2O-110°$	.24		
		Total	100.38

If we neglect the Al_2O_3, Na_2O, K_2O, $H_2O-110°$, S, Cr_2O_3, NiO, and MnO, and assume that the 4.11 H_2O is in serpentine, this analysis yields the following percentages of minerals:

Magnetite	4.90
Serpentine	31.49
Olivine	61.22
Calcite	0.63
Magnesite	1.58
Total	99.82

This result is undoubtedly very close to the truth.

The mass of the peridotite is occasionally traversed by veins of fibrous serpentine or amianthus, which appear to have been produced from the peridotite itself along lines of minor dislocation. The fibers of the serpentine run perpendicularly to the walls, as is the common case in such bodies of rock, and through the mass of the fibers grains of chromite are at times distributed in recognizable lines. These veins of serpentine become rusty on exposure and yield a bright red or brown decomposition product, which at once attracts the eye of a trav-

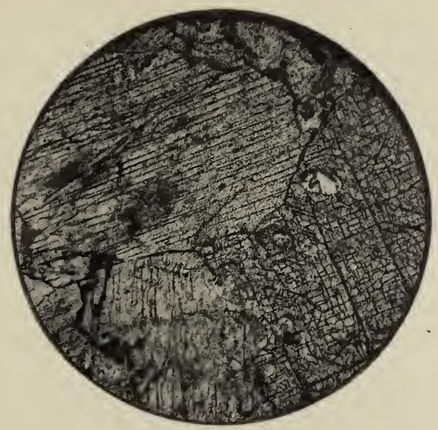
PLATE VI.

PLATE VI.

(*A*) Pyroxenite, Tulameen River, British Columbia. × 70 diam.

(*B*) Augite-syenite; augite, orthoclase, and magnetite, Tulameen River. × 70 diam.

(*C*) Serpentinized peridotite, Mount Soloviev, Urals. × 70 diam.



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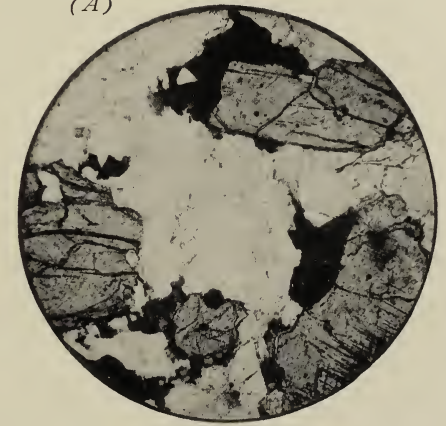

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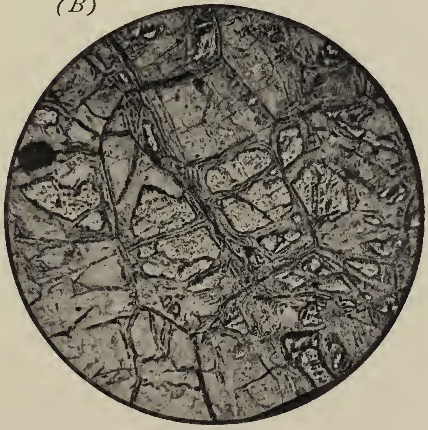

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eler or prospector. Occasionally the peridotite becomes a dense black serpentine, especially in the vicinity of the dislocations. Shining specks of chromite appear through the dark-green mass. Every endeavor was made by the writer to discover in the midst of the peridotite a mass of chromite of large extent, but except for bunches the size of the fist or at times still larger, and for certain minor streaks and veinlets, the search was unsuccessful. Great masses of the rock appeared with no chromite at all except in microscopic form.

Pyroxenite; augite-syenite.—The pyroxenite is a black, rather coarsely crystalline rock, which, in typical cases when examined with the microscope and as shown in Pl. VI, *A*, contains practically nothing else than common green augite. It has sometimes been subject to geological deformation, and has then developed secondary hornblende, and in a few cases a little original brown hornblende has been observed. Magnetite is not infrequent, and at Lodestone Mountain it becomes a prominent feature in the rock. It occurs, however, richly distributed through the pyroxenite and not in large, pure segregations. In the upper waters of Slate Creek and in the headwaters of the North Fork of Granite Creek and of Newton Creek much feldspar enters the pyroxenite, changing it to an augite-syenite (Pl. VI, *B*). When examined microscopically all the samples of this rock which were obtained indicated unstriated feldspar, and therefore orthoclase, as the prevailing component. This was a matter of surprise, because in the field it was thought that the rock would certainly prove to be a gabbro or a diorite. On the contrary, it is a very basic syenite, and it therefore furnishes some interesting parallels with the rocks in the platinum region of the Urals. The discovery of pyroxene upon one of the platinum nuggets, and, so far as known, the entire absence of pyroxene in the peridotite, as well as the absence of olivine in the pyroxenite, make it probable that the platinum has been derived from both of these rocks. The pyroxenite is clearly a later rock than the peridotite, because on Mount Olivine (which name, as earlier stated, has been given to the high peak where the peridotite reaches its maximum elevation just south of the mouth of Eagle Creek) tongues and dikes of pyroxenite were found penetrating the peridotite, and on the slope of Mount Olivine toward the Tulameen dikes of pyroxenite in peridotite can likewise be observed. It is possible that the syenite is a separate intrusion from the pyroxenite, but no evidence of this was met, and it seemed more probable, from such relations as could be discovered, that they shade into each other.

MOTHER ROCK OF THE PLATINUM.

In the endeavor to trace the platinum back to its original location in the mother rocks, it was evident after a brief survey of the ground that to be of economic importance it must occur in some special form of the peridotite or pyroxenite. Mountainous masses of these rocks could not, in the nature of the case, be systematically sampled and assayed. The abundance of chromite in the nuggets would lead one to search first of all for masses of chromite, and secondly one would wish to test every other peculiar type of rock. These latter were practically the veins of serpentine and the dikes of pyroxenite in the peridotite. Incidentally, too, a number of assays were made of the typical country rocks, of the basic dikes, such as diabase, and of the varieties rich in magnetite from Lodestone Mountain. As has been already stated, no deposits of chromite of large size could be found. Assays of the serpentine veins have yielded in a number of cases platinum in amounts varying from a trace to nearly 2 ounces to the ton, but more extended sampling did not indicate a sufficiently even distribution of the platinum to justify exploitation. Assays of the older pyroxenite from lines of dislocation and from Lodestone Mountain, where the contained magnetite is abundant, failed to give other than very small traces or nothing whatever. A most careful search was made over the talus slopes and the exposed ledges in the endeavor to discover platinum in place, and hundreds of hand specimens in which chromite was especially abundant have been examined with the lens. In no case could a nugget be found. But it is fair to state that, when in small bits, chromite yields a shining fracture that is very difficult to distinguish from platinum itself, and while the writer was in no case able to assure himself, even by microscopic examination, that platinum was present, it is possible that very small scales of it were overlooked. Masses of rock rich in chromite were cobbed in several cases and were crushed and panned, but even in the concentrates it was not certain that platinum was present. Assays, however, did indicate it. The conclusion is therefore inevitable that the platinum, as a rule, is in excessively fine scales and that the large nuggets are rare. It requires the concentration, in the processes of weathering, of an enormous mass of rock in order to yield the gravels. The drainage system in British Columbia is comparatively young, and no such amount of rock has been exposed to concentration as has been the case in the old and long eroded region of the Urals. Probably from this cause the amount of the gravels as well as of the available platinum is less in British Columbia than in Russia.

Rumors are current along the Tulameen that platinum had been discovered in former years near the mouth of Siwash Creek, which enters the Tulameen about 3 miles above Eagle Creek. Accordingly, a trip was made to this locality with a view of testing the report. The trail crosses Siwash Creek half a mile or more above its junction with the Tulameen and at an elevation of 200 or 300 feet above the latter. Below the ford Siwash Creek flows in a deep and narrow gorge, with numerous cascades, all due to the sheeting of the granite. In several places not far below the trail lines of dislocation are evident. One crosses the Siwash at right angles to its line of flow and has changed the granite to a more or less decomposed mass over a width of 15 to 20 feet. The granite is stained green by chlorite. Assays of this material indicated a trace of platinum. At the first high cascade, a short distance below, the creek flows in a gutter caused by a belt of schistose rock, the schistosity appearing to be the result of excessive shearing in the granite. Samples of this material yielded good qualitative tests for platinum, although not enough to weigh. The identification of platinum in a rock of this character is extremely interesting, because it is a highly acidic eruptive and in strong contrast with the olivine and pyroxene rocks with which platinum is especially identified. The granite at Siwash Creek consists of quartz, orthoclase, plagioclase, biotite, and a little epidote. It is a typical granite, and except for the manifest effects of crushing does not deserve detailed description. Whether the platinum has been introduced in solution along lines of dislocation or whether it was an original mineral in the igneous rock can not be stated. No assays have been made of the unaltered material, and, so far as is known to the writer, its presence is limited to the lines of dislocation. The granite along Siwash Creek is also penetrated by a number of narrow dikes of diabase, but so far as known these are barren of platinum.

The following table gives the results of about 35 assays. Where trace is given it means a coloration test.

Tabulation of assays of platinum-bearing rocks from the Tulameen district, British Columbia.

Kind of rock.	Ounces per ton.	Remarks.
Banded zone of fibrous serpentine in peridotite.	.25	Rusty; poor in chromite.
Do	Tr.	0.2 per cent chromite, by panning.
Do	None.	0.5 per cent chromite, by panning.
Do	.25	
Do	None.	
Do	None.	
Do	None.	
Do	None.	
Do	.125	Some gold—not all platinum.
Chromite or rock rich in chromite	.5	Selected chromite.
Do	None.	Rock rich in chromite.
Do	None.	Do.
Do	None.	Do.
Do	....	8 per cent chromite on panning.
Do	Faint tr.	Peridotite, 4.5 per cent chromite.
Olivine-diabase	None.	Typical olivine-diabase.
Do	None.	Bowlder.
Pyroxenite dike	.25	In peridotite.
Do	.125	Pyroxenite rich in magnetite, dike in peridotite.
Pyritous talcose rock	Faint tr.	Pyritous streak in peridotite next a quartz-porphyry dike.
Crushed pyroxenite	Faint tr.	Serpentinized pyroxenite along a line of displacement.

Tabulation of assays of platinum-bearing rocks from the Tulameen district, British Columbia—Continued.

Kind of rock.	Ounces per ton.	Remarks.
Peridotite	Faint tr.	Fresh peridotite.
Serpentinized peridotite	Faint tr.	
Do	Faint tr.	
Serpentine	Faint tr.	
Dark serpentine	Faint tr.	
Fresh peridotite	Strong tr.	
Sheared pyroxenite	None.	
Do	None.	
Serpentinized peridotite	None.	From crushed zone.
Do	Faint tr.	11 per cent chromite.
Sheared granite	Faint tr.	Sample from 20 feet of face.
Altered granite	.125	Much chlorite.
Granite	Faint tr.	Next trap dike.
Schistose streak	.125	Probably a sheared granite.
Pyroxenite	Faint tr.	Dike in peridotite.
Old volcanics	----	Slight trace of iridio-platinum.
Do	None.	

The early placer washings and the two or three later hydraulic plants were all operated upon the gravels above the levels of the main creeks or in the shallow waters where bed rock was not deeply buried. Some later projected enterprises are based on dredging the Tulameen, but they have not yet assumed visible shape.

An analysis of the Tulameen platinum was made by Dr. G. Chr. Hoffmann, chemist of the Geological Survey of Canada.[a] The sample weighed originally 18.266 grams. Of this, 17.894 was platinum and the rest rock matter—magnetite, a little pyrite, and a few flakes of gold. Sp. gr. of platinum, 16.686. The platinum was separated into a magnetic part, 37.88 per cent, and a nonmagnetic part, 62.12 per cent. These were analyzed separately, and then the total analysis was computed, as follows:

Analysis of platinum from the Tulameen River, British Columbia.

	Magnetic.	Nonmagnetic.	Total.
Pt	78.43	68.19	72.07
Pd	0.09	0.26	0.19
Rh	1.70	3.10	2.57
Ir	1.04	1.21	1.14
Cu	3.89	3.09	3.39
Fe	9.78	7.87	8.59
Iridosmine	3.77	14.62	10.51
Embedded chromite	1.27	1.95	1.69
	99.97	100.29	100.15

Nonmagnetic, sp. gr. 17.017; magnetic, sp. gr. 16.095.

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[a] Report of the Survey, Vol. II, 1886, Part T. Trans. Roy. Soc. Canada, Vol. V, 1887, p. 17.

In each case some of the grains contained chromite. It is evident that iridosmine is relatively high in the nonmagnetic portion and that iron is the same in the magnetic portion. Dr. Hoffmann has announced the occurrence of platinum in the black sand of Rock Creek, a tributary of the Kettle River, Osoyoos division, Yale district.[a] Platinum has also been met in small quantities at Lilooet and elsewhere in the drainage of the Fraser River.

ALBERTA.

Dr. Hoffmann has detected platinum in sands from near Edmonton, on the North Saskatchewan River.[b]

NORTHWEST TERRITORY.

Platinum has been reported in the black sands which have been obtained from the Yukon off the mouth of the Teslin and the Lewes rivers. The amounts are stated to be considerable. Forty cubic feet of sand are said to have yielded 12 pounds of concentrates, which contained platinum at the rate of 96 ounces to the ton. This means about two-fifths of an ounce to a yard of gravel.[c]

UNITED STATES.

ARIZONA.

Specimens of a shaly rock have been sent to the East from some locality near Williams, Arizona, which have yielded assays for platinum. The clays in Cataract Canyon, a branch of the Grand Canyon, are also said to contain platinum.

CALIFORNIA AND OREGON.

As soon as the gold washings were developed in California, in 1849, scientific interest was attracted to the small accessory minerals which occurred with the colors. The presence of platiniridium was early announced by R. M. Patterson, of the Philadelphia mint,[d] and subsequently platinum itself was discovered in a great many places. The most productive deposits are in Trinity County, along the Trinity River, 3 to 4 miles below Junction City, but the annual product amounts to only a few ounces. Platinum and iridosmine have also been found in the beach gravels at Port Orford, which is in Oregon, some distance north of the California line. Some interest has been felt in saving these minerals, but they are excessively fine and the quantity is not great. They occur along the coast at other localities near this point. Further details will be found in the subsequent citations. The platinum resources of California have been very carefully investigated by D. T. Day, who has published a paper[a] summarizing and tabulating the results of many tests. Dr. Day's results are herewith quoted in full.

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[a] Report Geol. Survey Canada, Vol. VI, Part R, p. 9.

[b] Idem, Vol. V, Part R.

[c] U. S. Consular Reports, Vol. LIX, 1899, p. 567. The Teslin River is here called the Hootalinqua. The Mineral Industry, Vol. VII, p. 569.

[d] The earliest announcement of platinum from California known to the writer is by R. M. Patterson, Ueber die Beschaffenheit und das Vorkommen des Goldes, Platins, und der Diamanten in den Vereinigten Staaten: Zeitschr. Deutsch. geol. gesell., Berlin, Vol. II, 1850, p. 61. The paper is a translation of a portion of a letter which was addressed to the American Secretary of State by Mr. Patterson, of the Philadelphia mint.

As early as 1852 Prof. W. P. Blake[b] called attention to the existence of platinum at Port Orford, on the Oregon coast, and noted that the platinum equaled from 10 to 30 per cent of the gold. This article seems to be the original source of the statement that the proportion of platinum to gold increases northward. B. Silliman,[c] in his mineralogic notes on California, etc., extended our knowledge to the occurrence of platinum in the older deep placers, worked by the hydraulic process in Butte County. He also notes the occurrence of iridosmine with the platinum. Meanwhile T. Sterry Hunt had found platinum and iridosmine on the Rivière du Loup, Quebec, Canada, in 1851.

The various notes concerning the finding of platinum on the Pacific coast have been well summarized in the publications of the California State mineralogist, and show that platinum has been found at many places on the Pacific beach from as far south as San Bernardino County northward to the mouth of the Columbia. Indefinite reports have been made of its occurrence farther north, on the Washington beach, but its amount is certainly not great. The principal beaches where platinum has been reported, beginning at the south, are: Santa Barbara, Lompoc, the beaches of San Luis Obispo County, Santa Cruz, and occasionally between Santa Cruz and the Golden Gate. In accordance with Blake's statement, the richest beaches are farther north, in Humboldt and Del Norte counties. The beach mines of Gold Bluff, north of Arcata, Big Lagoon, Stone Lagoon, Little River, Crescent City, California, and Gold Beach and Port Orford, in Coos County, Oregon, have all yielded platinum in commercially appreciable quantities. Still farther north platinum is found at Yaquina Beach, Oregon, but the sands there are poor. Port Orford has proved, perhaps, the richest beach.

Sharpless and Winchell have made an unusually careful examination of the sands at Bandon, on the Oregon beach. They almost invariably found platinum, but the proportion was not so encouraging as less careful workers had estimated. All this beach platinum is discouragingly fine and difficult to save.

Most of the platinum product has come from inland diggings, where the grains are comparatively coarse. It has become well known in the placers of the American River, and in Plumas, Shasta, Trinity, and Siskiyou counties, California. The Bee Gum district in Shasta County, the Hay Fork district in Trinity County, and the deposits along the Trinity from Chapman's mine, south of Junction City, northward to beyond North Fork, are most promising.

Conditions of occurrence.—Though platinum metals are so frequently found in many of the gold placers of the region including Trinity, Shasta, and Siskiyou counties, their occurrence in this region is by no means universal. There seems, for example, to be no platinum in the Weaverville placers on the Trinity. The platinum-bearing placers confirm the accepted idea that the platinum originates in the serpentine rock in which this region abounds; for the platinum-bearing gravels are sure to be closely associated with some prominent serpentine ridge. Nevertheless, no platinum has yet been found in place within the area named.

A hurried trip through this region enabled the writer to learn, by the analytical aid of Dr. Waldron Shapleigh, that in the Bee Gum district of Shasta County, at

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[a] Trans. Am. Inst. Min. Eng., February, 1900, Vol. XXX, p. 702.

[b] Am. Jour. Sci., 2d series, Vol. XVIII, p. 156, and Vol. XXII, p. 8.

[c] Am. Jour. Sci., 3d series, Vol. VI, p. 132.

Hay Fork, and at Chapman's mine, on the Trinity, osmiridium makes up perhaps the greater part of the mixture of platinum metals. At Chapman's mine Colonel Barrows obtained 30 ounces of small nuggets averaging one-third inch in diameter, apparently altogether too hard for platinum, and yet considerably coarser than is usual for osmiridium, which has the habit of occurring in very small scales. Dr. Shapleigh has shown that these nuggets yield a small amount of platinum on treatment with aqua regia, and then fall apart into the ordinary scales of osmiridium. He has found, also, that the Pacific beach platinum often contains more than 90 per cent of osmiridium. This explains the fact that little effort has been made to mine the platinum, for until recently the osmiridium has had practically no value.

At the time of my visit platinum was noticed also in the placers near Grants Pass, Oregon, and by examining numerous samples of black sands traces of platinum were found in the Snake River from Bakersville to Lewiston, and in a sand reported to come from Miles City, Montana.[a]

In examining the well-known platinum localities on Granite Creek, near its junction with Tulameen Fork, in British Columbia, it was estimated that the placers contained about one-fifth as much platinum as gold. I could get no test for osmium, but Dr. Hoffmann, of the Canadian geological survey, has found samples of platinum yielding as high as 25 per cent, and on the average about 10 per cent, of osmiridium.

In further search for the platinum metals, the writer collected heavy sands from placer mines in California, Oregon, Washington, Idaho, Montana, and Alaska. These samples averaged 4 pounds in weight. The sand was first separated by ordinary assay sieves into about nine sizes: Coarser than 20-mesh; through 20, 40, 60, 80, 100, 120, 160, and then 200 mesh. Each size was then in good condition for easy separation of the highly magnetic portion by a rude form of separator. By limiting the magnetic separation to the highly magnetic particles, very little gold or platinum was removed with the magnetic portions, as the panning of these portions proved.

By panning each size and then counting (or weighing, where the amount was considerable) the flakes of gold and platinum a fair idea of the proportion of platinum to gold could be gained. As the sieving was carried to such uniform sizes, it was possible, by counting weighed amounts, to estimate the unit weights of flakes of the different sizes, and thus to approximate, roughly, the total weight of gold and platinum obtained.

The results are shown in Table I.

In addition to the sands mentioned above, about 25 ounces of Klondike gold dust was examined, and only a grain or two, probably of platinum, was found.

A number of concentrates collected by Mr. A. H. Brooks, of the United States Geological Survey, from the Tanana River district, in Alaska, and also the beach sands brought from Cape Nome by Mr. Brooks and Mr. Schrader, showed no platinum.

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[a] Dr. F. W. Traphagen confirms this find of platinum at Miles City, Montana. The concentrated sand examined by him contained 10 per cent of platinum.

TABLE I.—*Pan tests of platinum-bearing gold sands.*

Post-office and State.	Weight of sample, in ounces.	Value of platinum metals per ton.	Percentage of platinum to gold.
CALIFORNIA.			
Crescent City, Del Norte County	80	$0.04	17
Smith River, Del Norte County	23	0.54	6.8
Crescent City, Del Norte County (South Fork Smith River)	62	681.31	2.230
Trinity Center, Trinity County	35	0.28	79
Burnt Ranch, Trinity County	45	13.09	104
Weaverville, Trinity County	20	0	0
Big Bar, Trinity County	40	3.75	11
Junction City, Trinity County	49	1934.18	----------
Hawkins Bar, Trinity County	63	4.05	34
Randsburg, Kern County	50	0	0
Wilson Creek, Humboldt County	45	0.02	8
Big Lagoon, Humboldt County	60	0	0
China Flat, Humboldt County	25	177.08	138
Orleans, Humboldt County	36½	6.87	50
Hamburg, Siskiyou County	20	0	0
Do	55	.86	280
Sawyers Bar, Siskiyou County	79	2.39	31
Oak Bar, Siskiyou County	123	0.54	12
Fort Jones, Siskiyou County	51	0.07	.1
Sawyers Bar, Siskiyou County	45	0.07	3
Klamath River, Siskiyou County	63	2.40	51
Rock Ranch, Siskiyou County	29	0.51	26
Callahan, Siskiyou County	58	7.02	134
Hornbrook, Siskiyou County	19	0.18	06
Callahan, Siskiyou County	25	0	0
Scott River, Siskiyou County	9	1.83	.6
Happy Camp, Siskiyou County	48	50.97	148
Cecilville, Siskiyou County	20	2.01	14
Do	14½	0.15	8
Walker, Siskiyou County	37	0	0
Shasta River, Siskiyou County	30	0	0
Klamath River, Siskiyou County	30	0	0
Gottville, Siskiyou County	20	0	0
Camptonville, Yuba County	37	.32	4
Do	50	0	0
Quincy, Plumas County	40	0	0
Laporte, Plumas County	50	0	0
Butte Valley, Plumas County	35	0	0
Do	30	0	0
Slate Creek, Sierra County	40	0	0
Gibsonville, Sierra County	50	0	0
Do	20	0	0
Chico, Butte County	40	5.46	8.4
Magalia, Butte County	60	0.30	1.2
Inskip, Butte County	20	0	0
Brownsville, Butte County	30	0	0
Michigan Bluff, Placer County	56	.34	1
Do	59	0.19	.1
Grizzly Flats, Eldorado County	40	0	0
Smith Flat, Eldorado County	40	0	0
Railroad Flat, Calaveras County	50	0	0

TABLE I.—*Pan tests of platinum-bearing gold sands*—Continued.

Post-office and State.	Weight of sample, in ounces.	Value of platinum metals per ton.	Percentage of platinum to gold.
CALIFORNIA—continued.			
Mokelumne Hill, Calaveras County	84	$0.02	.2
Genesee, Plumas County	63½	0.06	.008
OREGON.			
Denmark, Curry County	25	1.08	300
Denmark, Curry County:			
No. 1	49½	.06	20
No. 2	44½	0	0
No. 3	50½	.15	18
No. 4	48½	.24	10
No. 5	47½	.25	60
No. 6	45	.32	121
No. 7	50	0	20
No. 8	57½	.21	50
No. 9	53	.03	3.6
No. 10	50	0	0
No. 11	52	.01	12
2 miles north of Pistol River, on Oregon Beach	118	.06	8
2 miles south of Pistol River, on Oregon Beach	60	0	0
IDAHO.			
Rocky Bar, Elmore County	50	0	0
Princeton, Latah County	60	0	0
MONTANA.			
Forest, Missoula County	50	0	0
ALASKA.			
Sand from beach north of Lituya Bay	100	0	0

The total results above reported show that if all the sands examined were considered together, there would be about half as much of the platinum metals as of gold.

With regard to the percentage of platinum in the sands from various parts of the Pacific coast, Dr. Shapleigh has furnished the following table:

TABLE II.—*Percentage of platinum in sands from Pacific coast.*

Locality.	Metals.	Highest per cent.	Lowest per cent.
Bee Gum district, Shasta County, Cal	Platinum	20	13.5
	The other platinum metals	84	79
Hay Fork district, Trinity County, Cal	Platinum	73	30
	The other platinum metals	58	18
Trinity River district, California	Platinum	27	15
	The other platinum metals	80	72
Crescent City, Del Norte County, Cal	Platinum	11	8
	The other platinum metals	83	46
Port Orford, Oreg	Platinum	47	15
	The other platinum metals	83	23

The "other platinum metals" include iridium, osmium, ruthenium, rhodium, and palladium.

The platinum from California is characteristically low in iron and at times quite high in copper and iridium. It may also contain much iridosmine mechanically involved in the nuggets. In some of these respects it presents a contrast with the metal from Russia.

The following analyses have been collected from various sources:

Analyses of platinum from the Pacific Coast.

	1	2	3	4	5	6	7
Pt	85.50	79.85	76.50	63.30		57.45	57.75
Ir	1.05	4.20	.85	.70	53.50	.40	3.10
Rh	1	.65	1.95	1.80	2.60	.65	2.45
Pd	.60	.95	1.30	.10		.15	.25
Os		.05	1.25		43.40		.81
Ru					.50		
Au	.80	.55	1.20	.30		.85	
Fe	6.75	4.45	6.10	6.40		4.30	6.79
Cu	1.40	.75	1.25	4.25		2.15	.20
Iridosmine	1.10	4.95	7.55	22.55		37.30	27.65
Sand	2.95	2.60	1.50			3	
Pb			.55?				
Hg				.60			
Total	101.15	100	100	100	100	100.25	99

NOTES TO TABLE.

Nos. 1, 2, 3, 5, and 6 are taken from the valuable paper by Deville and Debray in the Annales de Chimie et de Physique, Vol. LVI, 1859, pp. 449-481.

No. 4 is from Kromayer, Archiv Pharmacie, ii, Vol. CX, 14. Jahresberichte, 1862, p. 707.

No. 7 is by F. Weil, and was originally published in Armengand's Genie Industrielle, May, 1859, p. 262. See also Dingler's Polyt. Jahrbuch, Vol. CLIII, p. 41; Neues Jahrb., 1860, p. 354.

PAPERS REFERRING TO PLATINUM IN CALIFORNIA AND OREGON.

The following references to the occurrence of platinum in California will be found of interest:

CALIFORNIA, Annual Reports of the State Mineralogist, as follows: Vol. IV, 1884, pp. 309, 311 (on iridium, see p. 231); Vol. VIII, p. 217, for Humboldt County; p. 584, for Siskiyou County; Vol. IX, p. 717, for Trinity County; Vol. XII, p. 408, for Trinity County.

DAY, D. T., Notes on the occurrence of platinum in North America: Transactions American Institute Mining Engineers, Vol. XXX, p. 702, February, 1900.

GENTH, F. A., On a probably new element with iridosmine and platinum from California: Proceedings Academy Natural Sciences, Philadelphia, December, 1852, p. 209. American Journal of Science, March, 1853, p. 246. Dr. Genth does not mention the exact locality from which he obtained the sample. He notes the presence of sisserskite, $IrOs_4$, in six-sided scales, and some platin-iridium and native platinum. On analysis the platinum yielded Pt. and Pd. 90.24, Ir. and Rh. 2.42, Fe. 6.66, and sisserskite 0.68.

SILLIMAN, B., American Journal of Science, 3d series, Vol. VI, p. 132.

On platinum in Oregon the following will be of interest:

BLAKE, W. P., American Journal of Science, 2d series, Vol. XVIII, p. 156. Professor Blake states that in the placer gold of Port Orford, on Cape Blanco, there is as much as 10 to 30 per cent of platinum which in earlier years was discarded.

COLORADO.

A number of reports have been current of discoveries of platinum in Colorado, and the writer has seen several samples and the results of assays, but in no case were exact localities recorded. One sample resembles a black hornfels and probably came from a contact zone of eruptives on shale or slate. It was permeated by films of pyrrhotite. It resembled closely a similar rock which was said to have come from the Lake Superior region and which was circulated among geologists and consumers of platinum ten to fifteen years ago.[a]

GEORGIA.

Platinum has been reported from Lumpkin County, Ga., but the writer has been unable to obtain details of its geological relations.[b]

IDAHO.

Platinum has been discovered in the gold-bearing sands of the Snake River from Bakersville to Lewiston, along the western border of the State.[c]

MONTANA.

Platinum has been reported from the vicinity of Miles City.[d]

NEW YORK.

A remarkable nugget of platinum was found about 1880 in the glacial drift near Plattsburg, N. Y. In course of time it came into the possession of Prof. Peter Collier, who submitted it to a careful mineralogical and chemical examination. The nugget consisted of metallic platinum and chromite in the proportions of 46 per cent of the former and 54 per cent of the latter. It measured 4 by 3 by 2¼ cm. It weighed 104.4 grams. Its specific gravity was 10.446. The specific gravity of the separated platinum was 17.34. The nugget was slightly magnetic. After the chromite had been mechanically separated from this metallic portion, the latter was soluble all but 0.74 per cent. An analysis of the platinum yielded the following result:

Analysis of platinum from nugget found in glacial drift near Plattsburg, N. Y.

Pt	82.814
Ir	.627
Rh	.286
Pd	3.105
Fe	11.040
Cu	.397
Al_2O_3	1.953
CaO	.069
MgO	.030
Total	100.321

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[a] Compare note on the Rambler mine, Wyoming, p. 34.

[b] Charles Bullman, The Mineral Industry, Vol. I, p. 375.

[c] D. T. Day, Trans. Am. Inst. Min. Eng., Vol. XXX, p. 705, February, 1900.

[d] D. T. Day, idem, p. 705.

Some osmium was also present, but was not determined on account of the difficulty of the analysis. The gangue was mostly chromite and on analysis yielded the following:

Analysis of gangue of same platinum nugget.

Cr_2O_3	54.944
FeO	31.567
Al^2O_3	5.690
SiO^2	3.731
CaO	3.405
MgO	.941
Total	100.278

It is evident from these results that chromite is the chief component and it is possible that in it a little alumina may have replaced some of the chromic oxide. There remains uncombined, therefore, silica, lime, some alumina, and probably a little magnesia, although it is also possible that some, or even all, of the magnesia may have replaced a portion of the ferrous oxide of the chromite. Pyroxene would be the most natural mineral which would embrace the remaining uncombined elements.[a]

As this nugget was found in the glacial drift it has clearly been brought in from the north. The glacial striations near Plattsburg have been reported by H. P. Cushing to run from S. 15° E. to S. 15° W. and to be influenced by the local topography. Farther south the writer has noted them in the valley of the lake, as well as back in the mountains, to be S. 60° W. as a rule. A southwesterly movement of the ice sheet would have brought glacial material to Plattsburg from the great areas of serpentine which occur in Quebec north of Vermont and which are commercially productive of chromite. There seems little reason, therefore, to doubt that the nugget has been derived from this source, but as yet no platinum has been announced in the serpentine region.

NORTH CAROLINA.

In 1847 C. U. Shepard announced the discovery of platinum in a small sample of concentrates, which had been saved by Mr. T. J. Clingman, of Asheville, N. C., from gold washings in the northern part of Rutherford County. The platinum nugget weighed 2.541 grains, and had a specific gravity of 18. This, if authentic, was the earliest discovery of platinum in the United States, but the metal must be extremely rare in the region, because no further records of its occurrence in the metallic state have been made. North Carolina is rich in areas of serpentine and basic igneous rocks.[b] Prof. F. P.

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[a] A remarkable nugget of platinum, by Peter Collier: Am. Jour. Sci., 3d series, Vol. III, p. 123.

[b] Native platinum in North Carolina, by C. U. Shepard: Am. Jour. Sci., 2d series, Vol. IV. p. 280. See also Minerals and mineral localities of North Carolina, by F. A. Genth: Vol. II of Geol. of N. C., p. 12. Two other localities are given, and palladium is also reported.

Venable, however, after a careful examination of the evidence has decided that the discovery was probably not authentic.[a]

After the discovery of sperrylite in the Sudbury region of Ontario, great interest was felt by all geologists in locating it in other places. In 1894 Mr. W. E. Hidden observed it in the pannings of gravels taken from the Ned Wilson branch, Coler Fork of Cowee Creek, Macon County, N. C. The quantity was small, and the announcement was not published until 1898, when more was found in connection with the mining of rhodolite, a variety of garnet of gem grade. Messrs. Hidden and Pratt subsequently traced the rhodolites to their parent rock, which proved to be a ledge on the top of Mason Mountain. The rock consists of rhodolite, biotite, and considerable iron sulphides. In pannings of some of the loose decomposition products taken from the surface of the ledge, crystals of sperrylite were discovered. This rare arsenide of platinum has therefore been found in place in North Carolina.[b]

PENNSYLVANIA.

In 1852 Dr. F. A. Genth detected platinum in a clay slate from Lancaster County, Pa. The slate contained chalcopyrite and galena, and when 300 grams were fused with oxide of lead and black flux they yielded a button which, on being cupelled, was found to contain from 0.0005 to 0.0014 per cent silver, gold, and platinum. Some iridium was likewise identified in a qualitative way. Ilmenite from the same general locality afforded tests for silver and platinum.[c]

Platinum has also been detected by assay in a black shale which occurs east of Boyertown and near the little village of Sassamansville. The locality is not far from the line between Montgomery and Berks counties. Although some tests afforded amounts sufficient to weigh, the distribution is too irregular and variable to warrant mining.[d] A vein from this vicinity containing quartz, pyrites, and oxidized lead minerals yielded one-half ounce per ton of platinum and either gold or palladium.

A pyritous dioritic gneiss from the Archean areas of Pennsylvania, locality not definitely known, has given assays from one-half ounce to over 2 ounces to the ton.

MEXICO.

Platinum has been reported from the Las Yedras mine, Sinaloa, but the writer has been unable to discover further particulars on record.[e] In a brief note on an interesting series of specimens from a quicksilver mine whose locality is not given, F. Sandberger has stated that with the ores he found some pseudomorphs of limonite after pyrites, which on assay yielded weighable amounts of platinum.[a]

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[a] Jour. Elisha Mitchell Sci. Soc., Vol. VIII, pt. 2, 1892. See also W. E. Hidden, Am. Jour. Sci., Vol. XXII, 1881, p. 25.

[b] Occurrence of sperrylite in North Carolina, by W. E. Hidden: Am. Jour. Sci., November, 1898, p. 381. See also same for April, 1898, p. 294, and for December, 1898, p. 467.

[c] F. A. Genth, Pharm. Centralblatt, 1852, p. 72.

[d] Information kindly furnished by A. W. Johnston.

[e] Charles Bullmann, The Mineral Industry, Vol. I, p. 375.

CENTRAL AMERICA.

HONDURAS.

Platinum has been reported from Choloteca and Gracias, but further particulars are not available.[b]

WEST INDIES.

SANTO DOMINGO.

Very early in the history of platinum grains were brought from Santo Domingo, probably in connection with the endeavors of the French to acquire possession of the island. The grains were obtained from the gold washings of the Yaqui River (or, as it is also spelled in foreign articles, Jacky, or Jacki, or Iacki). The Yaqui rises in the central part of the Republic and flows northwest into the sea near the boundary with Haiti. The French chemist, Vauquelin, submitted some of the grains to chemical examination in 1810. He first dissolved off a ferruginous crust, which gave a yellow solution with hydrochloric acid. In this way 0.3 gram was lost in a total of 36.7. On solution in aqua regia a residue of 0.8 gram was obtained, consisting of little black needles, with some quartz and a black sand. The needles were considered iridium and the black grains chromite. Qualitative examination yielded tests for copper, iron, chromium, osmium, iridium, rhodium, and palladium. M. Vauquelin believed that titanium was also present, but he obtained no test for gold.[c]

SOUTH AMERICA.

BRAZIL.

Platinum was observed at a very early date in the gold washings of Brazil. In the valuable description of this great country by C. F. Hartt it is specifically recorded as being found in several places in the province of Minas Geraes. The localities are chiefly in the basin of the Rio das Velhas, in the southern central part of this State. The country rock is described by Hartt as a syenitic gneiss which is cut by quartz veins. In the Bõa Esperança veins platinum is said to be present, and at Gongo Seco, 20 miles east of Morro Velho, the gold is said to contain palladium. Hartt remarks in general that the gold of Brazil is always alloyed with silver and occasionally with platinum.

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[a] Neues Jahrbuch für Mineral., 1875, p. 625.

[b] Charles Bullmann, The Mineral Industry, Vol. I, p. 375.

[c] L. N. Vauquelin, Analyse du platine trouvé à Saint-Domingue: Annales du Museum d'Histoire Naturelle, Vol. XV, 1810, p. 317. Compare also Guyton de Morveau, Annales de Chemie, Vol. LXXIII, 1810, p. 334. A. Vogel, Platinerz von San Domingo: Jour. Chem. Soc. London, Vol. XXVII, 1874, p. 196.

It may likewise contain iron. Iridium and iridosmine occur in the gold washings of Minas. This reported occurrence of platinum in veins is an exceedingly interesting and important one, and corroborates in a general way the statements already made for several other places. Additional citations by Hartt are reproduced below, but the original sources have not been accessible to the writer. A peculiar variety of gold, known as "ouro preto," is obtained in this region. It was formerly collected in considerable quantity, but now only the poorest laborers pay attention to it. A sample obtained from O. A. Derby was analyzed in 1882 by W. H. Seamon, who gives the composition as follows:

Analysis of ouro preto from Brazil.

Gold	91.06
Palladium	8.21
Silver	Trace.
Iron	Trace.
Total	99.27

Specific gravity, 15.73.

The iron was regarded as a mechanical adherent. When calculated the formula is $PdAu_6$. Berzelius, in 1835, published a similar analysis from Porpez. This variety was called porpezite.

Analysis of porpezite from Brazil.

Gold	85.98
Palladium	9.85
Silver	4.17
Total	100.00

The geological relations of the peculiar gold-palladium alloy have been described by Johnson and Lampadius, as follows: The alloy occurs in beds of a rock, called by the natives zacotinga (or jacotinga), which is an aggregate of specular hematite, mica, quartz, and pyrolusite. This is the itabirite of the European writers. The rock is crushed and washed.[a]

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[a] Berzelius, Neues Jahrbuch für Mineral., 1835, p. 184. J. Cloud, Palladium in Brazilian gold: Poggendorf's Annalen, Vol. XXXVI, 1810, p. 310. C. F. Hartt, Geology and physical geography of Brazil, pp. 448, 542. Johnson and Lampadius, Journal für prakt. Chemie, Vol. X, 1837, p. 501. See, also, on the rock, Heusser and Claraz, Zeit. Deutsch. geol. Gesell., Vol. XI, 1859, p. 448. Lampadius and Plattner, Ueber das gemeinschaftliche Vorkommen des Platinerzes und des gediegen Silbergoldes in einem Gangfossile aus Brazilien: Jour. technische Chemie, Vol. XVIII, 1833, p. 453. (Not accessible to J. F. K.) W. H. Seamon, Analysis of native palladium gold from Taguaril, near Subara, Minas Geraes, Brazil: Chemical News, Vol. XLVI, 1882, p. 216. Williamson, Geology of the Parahyba Gold Region: Trans. Geol. Soc. Manchester, England, Vol. VI, 1866, p. 113. W. H. Wollaston, On platina and native palladium from Brazil: Philos. Trans. Royal Soc. London, Vol. XCIX, 1809, p. 189.

The following authorities are likewise cited by Hartt: Burton, The Highlands of Brazil; Castelnau, Expedition dans l'Amérique de Sud; von Eschwege, Geognostisches Gemaelde von Brasilien. No mention of platinum could be found by the writer in v. Eschwege's Pluto Braziliensis.

FRENCH GUIANA.

An announcement was made to the French Academy, in 1861, by Damour, that a very curious nugget had reached him from Aïcoupaï, on Hamelin Creek, in the basin of Appronaguel. It weighed 0.85 gram. Its specific gravity was 13.65. It was malleable, silvery white, and less fusible than gold. On analysis it yielded:

Analysis of nugget from basin of Appronaguel.

Platinum	41.96
Gold	18.18
Silver	18.39
Copper	20.56
Total	99.09

It dissolved so easily in nitric acid that it was believed to be clearly a mechanical mixture, and not an alloy—that is, the copper and silver were easily removed, and a brown sponge of gold with white scales of platinum remained.[a]

COLOMBIA.

Platinum was first discovered in connection with gold washings in Colombia. The original sample was obtained at Cartagena and was brought to Europe in 1735. The sample was reputed to have been obtained in the river Pinto, a stream which the writer has been unable to locate on the modern maps. Colombia is now a producer of commercial platinum second in rank to the Urals. The deposits are all in the form of placers and are situated upon the western watershed, near the divide which separates the waters of the northerly flowing Atrato from those of the southerly flowing San Juan. The general district is called El Choco. It embraces two provinces—a northerly one, named Atrato, whose capital is Quibdó, and a southerly one, San Juan, whose capital is Novita. The greater part of the platinum is obtained in San Juan. It occurs with gold along the main stream and its tributaries from its junction with the Sipi to the headwaters. Charles Bullman states that below the Tamana the proportion is ten to one in favor of gold, while above it is two to one. The only outcropping rocks in the basin of the San Juan appear to be of very recent origin. They are described by Bullman as indurated clays and conglomerates, probably of Tertiary age. As Bullman was unable to discover evidences of marine life, he considers them to be fresh-water deposits. The sediments are at present much tilted, and are supposed to have been upheaved at the close of the Tertiary. There is evidence also of glacial action, according to Bullman, the ice having moved from northeast to southwest, and having transported bowlders, clay, sand, and the precious metals. These later deposits, in part at least of glacial origin, are locally called caliche. Bullman defines the word as follows: "By caliche is meant sand, pebbles, and bowlders bound or held together by clay, or it may be called a weathered, disintegrated, cement gravel." As shown in the accompanying section (fig. 3), the caliche rests upon clays and conglomerates. The present drainage has cut deeply into both the latter formations, and has concentrated in the river gravels the precious metals which were contained in the formations now constituting the banks. It is believed that the gold and platinum have come from the granitic, syenitic, and metamorphic rocks of the Andes. Mr. Bullman concludes that very little has been derived from fissure veins, although more or less quartz containing gold is obtained in the gravels.

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[a] Damour, Comptes rendus, Vol. LII, 1861, p. 688.

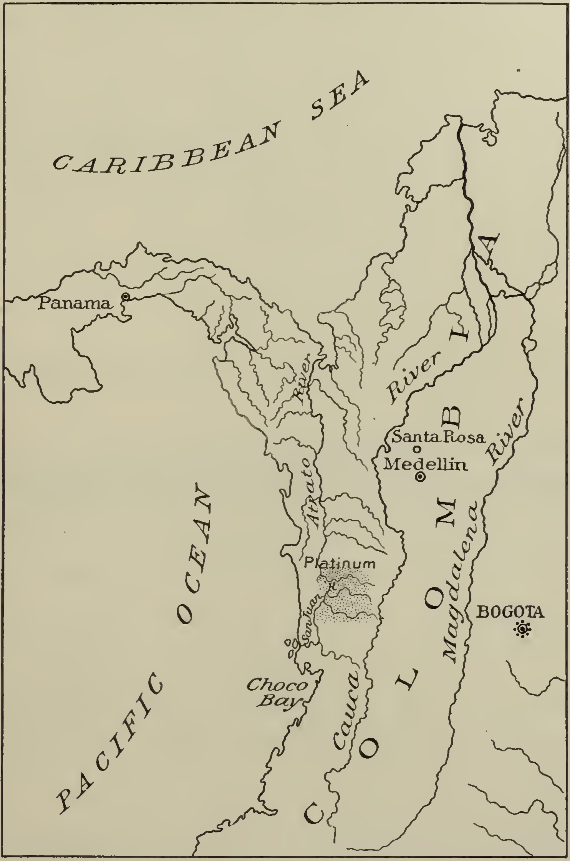

FIG. 2.—Sketch map of Colombia, showing the location of the platinum placers.

In mining, attention is paid both to the bars in the running streams and to the caliche. In working the former the miner builds up a little barricade of larger bowlders, in the lee of which the sands are dug up and washed in a batea. Women are more especially engaged in this work. The mining is carried on in a desultory manner, the natives working at low water and being content with such returns as supply the necessaries for their simple life in this region.

When sufficient water can be readily obtained it is used to sluice the caliche, which is broken down by bars, raked over somewhat with a crooked tool, and tumbled into the sluices. At periodic intervals the clean-up takes place. Some more ambitious attempts have been made to dredge the rivers, but without much success, the gravels being of low grade.

The nuggets of platinum occasionally carry chromite, but, although a considerable quantity has been examined by the writer, through the courtesy of Mr. A. W. Johnston, of the S. S. White Dental Manufacturing Company, other minerals aside from gold have not been observed. Other observers have recorded the characteristic presence of zircons. The nuggets occasionally reach rather large size. One in the museum of the geological department of Columbia University weighs 52.597 grams and has a specific gravity of 13.584. Assuming a specific gravity for platinum of 17.6 and for chromite of 4.5, this would imply 16.124 grams of chromite and 36.473 of platinum. It was obtained by Mr. Bullman. A still larger one is owned by Baker & Co., of Newark, N. J. Its weight is stated to be about 2 pounds.

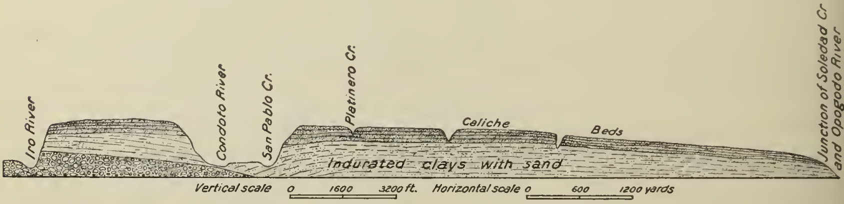
Iro River
Condoto River
San Pablo Cr.
Platinero Cr.
Caliche
Beds
Junction of Soledad Cr and Opogodo River
Indurated clays with sand
Vertical scale 0 1600 3200 ft.
Horizontal scale 0 600 1200 yards

FIG. 3.—Geological cross section of the caliche beds from the Iro to the Opogodo. (After Charles Bullman.)

Gold has also been observed involved in the nuggets of platinum, and it seems at times to occur with the latter mineral in the mother rock. The platinum has not been definitely traced back from these washings to the mother rock, but some observations were made, as far back as 1826, by Boussingault, a French traveler, who communicated them to Humboldt, by whom they were laid before the French Academy. Humboldt presented them with an introduction of his own, which has given the impression that the observations were made in Brazil, and has occasioned the erroneous citations of platinum from the province of Antioquia, Brazil, which appear in Dana's Mineralogy and elsewhere. M. Boussingault's observations were made at Santa Rosa, province of Antioquia, Colombia, about 10 leagues northeast of Medellin. The locality is situated 2,775 meters above the sea. The country rock is described as a syenite or syenitic gneiss of the same general quality as that which prevails at Medellin, and it is cut by many veins of quartz. The surface is covered by alluvium, which has been concentrated by the streams. Together with the gold, occasional lumps of limonite are met and are saved by the gold washers. They are afterwards pounded up and panned down, because they contain considerable gold. Other lumps of limonite are gathered directly from the outcrops of the veins and appear to be portions of the gossan. In the pannings of one of these lumps derived from the outcrop of a vein, Boussingault obtained grains of platinum which were the same in appearance as those washed from the gravels of El Choco. While the specimen was not found absolutely in place, there seems reason to believe that Boussingault has correctly referred it to its original situation, and has therefore recorded a very important and interesting case of the occurrence of platinum with other metallic minerals in a vein whose filling was largely quartz. Boussingault states that the syenite, together with porphyritic greenstones, extends from Santa Rosa over into the Choco district.[a]

EUROPE.

AUSTRIA-HUNGARY.

A few scales of platinum have been discovered as a very rare mineral in the gold-bearing sands of Ollálipian, Siebenbürgen.[b]

FRANCE.

Scales of platinum in very small amounts have been discovered in one or two places in France in connection with gold. Thus at Morbihan, in Brittany, it is occasionally seen with gold in tin-bearing sands which occur along the coast. It is likewise known at Gard, in Cevennes.[c]

The announcement was made in 1833 that platinum had been detected in galena in western France, but subsequent assays failed to corroborate the statement. Investigation, however, proved the presence of platinum in limonite in several localities in the Departments of Charente and Deux-Sèvres.[d]

In 1847 E. Gueymard, a French mining engineer, discovered the presence of platinum in tetrahedrite, which he found in metamorphic limestones on the mountain called Chapeau, above Chatelard, in the commune Champoleon, in the Vallée du Drac, Hautes Alpes. The limestone occurs in beds between protogine and a rock that appears to be related to spilite. The gray copper contains silver up to 12 per cent, and in addition antimony, lead, zinc, iron, sulphur, and a little arsenic. The gangue is dolomite, quartz, and barite, being very similar to the veins at Guadalcanal, Spain. M. Gueymard made a hundred analyses; 80 afforded no platinum, and in the remaining 20 the amount was not always large enough to weigh. His experiments were, however, subsequently verified in Paris, and of their reliable nature there seems to be no doubt. He extended his researches to St. Arey, near La Mure (Isère), and in the bournonite of the dolomites and of the altered limestones he identified platinum. Sometimes he could detect it in samples of 5 grams, and again he could not in samples of 20 grams, but it proved to be more commonly present than at Chapeau. A third locality was discovered in the Plan des Cavales, on the mountain of Rousses, Oisans, Isère. The country rock consists of protogine, gneiss, talc-schist, and some beds of Liassic limestone, now changed to dolomite and magnesian limestone. Here are situated old mines from which was obtained a foliated green carbonate of copper which carried 50 per cent Cu. This mineral yielded in two cases weighable amounts of platinum. Again, he discovered indications of platinum in slightly argentiferous gray copper and copper carbonate near Presles, on the right bank of the Bens, in Savoy.

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[a] The above notes upon platinum in Colombia have been drawn chiefly from a report which was made by Charles Bullman in 1890 for New York parties and which was privately printed. For the courtesy of its use the writer is indebted to Mr. A. W. Johnston, to whom acknowledgments are here made. In a modified form the general results of Mr. Bullman's examination also appear in the very valuable paper upon the Platinum Metals which he contributed to the Mineral Industry, Vol. I, p. 373. A description of the methods of gold washing will be found in the Engineering and Mining Journal, April 2, 1892, p. 347. Boussingault's paper appears in the Annales Chem. et Phys., Vol. XXXII, 1826, p. 204, and in Poggendorff's Annalen, Vol. VII, 1826, p. 515; Vol. X, 1827, p. 490.

[b] v. Zepharovitch, Mineralogisches Lexikon für Oesterreich, Vol. I, p. 318. See also Jahresber. Chem., 1847-48, pp. 1022 and 1152.

[c] A. Lacroix, Mineralogie de France Vol. II, p. 390.

[d] Dingler's Polytech. Journal, Vol XLIX, 1833, p. 232; Poggendorff's Annalen, Vol. XXXI, 1834, pp. 16 and 590; Phil. Mag., 1834, p. 158.

When M. Gueymard's samples were tested in Paris traces of rhodium and iridium were likewise identified. The amounts of the platinum metals are not, however, sufficient to justify mining.[a]

GERMANY.

A very interesting occurrence of allopalladium was early noted in the mines at Tilkerode, in the Hartz. It was at first thought that the mineral contained selenium, but the selenium was afterwards shown to be a mechanical mixture. The mineral was called eugenesite by Zinken. It contains palladium, silver, and gold.[b] The allopalladium occurs as microscopic six-sided scales on the gold of the Eskeborner shaft, together with quartz, selenide of lead, selenide of mercury, dolomite, and calcite. The mines at Tilkerode are based upon irregular lodes in diabase, or between it and neighboring slates.

Platinum has also been reported from the Siebengebirge[c] and from Freiberg.[d]

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[a] Mémoire historique sur la découverte du platine dans les Alpes, by E. Gueymard: Comptes rendus, Vol. XXIX, 1849, p. 814; Vol. XXXVIII, 1854, p. 941.

[b] Luedecke, Minerale des Harzes, p. 6.

[c] Berg- und Hüttenm. Zeitung, Vol. XIII, 1854, p. 232.

[d] Idem, Vol. VII, 1848, p. 628.

GREAT BRITAIN.

A few grains of platinum have been observed in the gold-bearing sands of Wicklow, in Ireland.[a] Some few scales have also been noted on the island of Jersey and in the sands at the mouth of the river Urr, Kirkcudbrightshire.[b]

RUSSIA.

It is a curious fact that platinum was not discovered in the Urals until nearly a hundred years after it had been brought to Europe from South America. It was, in fact, known to occur both in Colombia, Brazil, and in Santo Domingo before it was detected in the Rus-

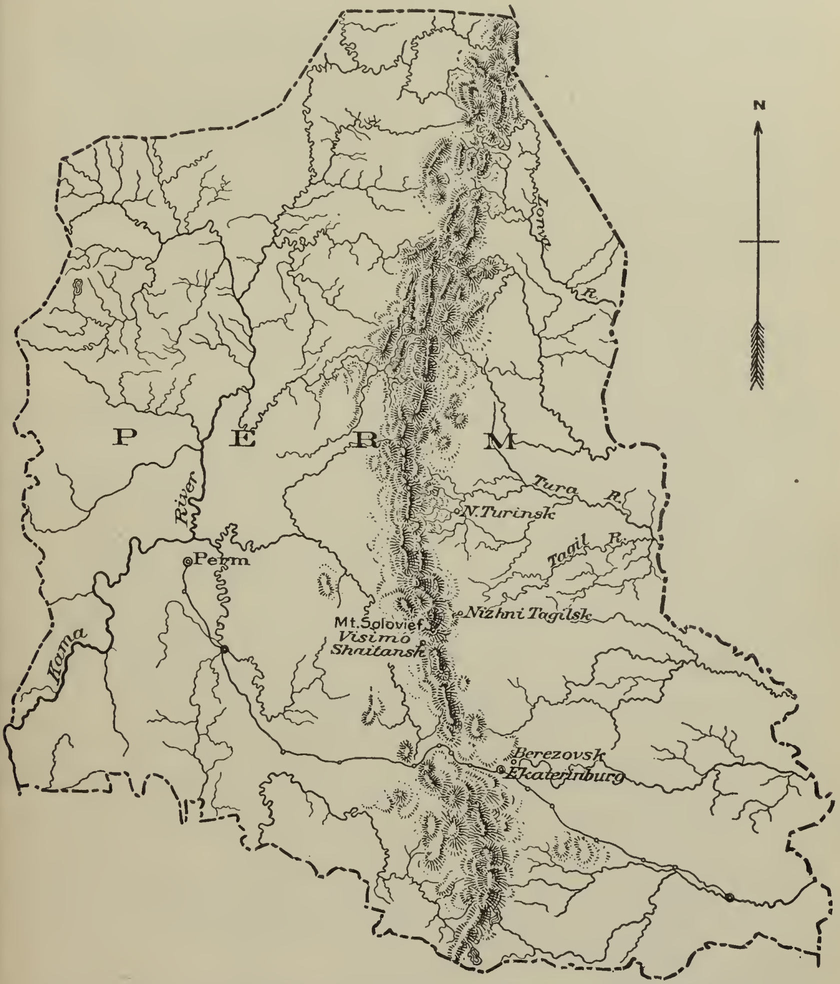

FIG. 4.—Map of Perm, Russia, showing the general geography of the platinum region.

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[a] W. Mallet, Philos. Mag., 3d series, Vol. XXXVII, p. 393.

[b] Greg and Lettsom, Mineralogy of Great Britain, 1858, p. 245.

sian gravels in 1819. It is possible that it was known at even a much earlier period in some of the gold washings of Bohemia, because certain old records are of such a character as to leave little doubt that the writers referred to platinum, and in Colombia in all probability it was known to the Spaniards in the first half of the sixteenth century.

The Russian sources of supply furnish nearly all the commercial platinum. Although the metal is known over a wide area, the really productive districts are comparatively limited. They lie along the eastern watershed of the Urals, in the eastern portion of the kingdom of Perm, and on the western watershed farther south. The boundary between European Russia and Siberia leaves the summits of the Urals north of the platinum district and runs off to the southeast, so that a large area of the eastern drainage is embraced in European Russia. A few years ago the greater part of the platinum came from the district of Nijni-Tagilsk, but at present the largest supply is obtained in the Goroblagodat and Bisersk districts, which are about 130 miles north.

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GOROBLAGODAT AND BISERSK DISTRICTS.

These two districts are situated northeast of the town of Nijni-Turinsk. From the watershed of the Urals two small rivers or creeks, called the Iss and the Veeya, flow eastward and enter the Tura River. They rise about 10 miles apart and preserve this general distance to their mouths. They are each about 30 to 40 miles long. The Tura, which is the main stream of the region, rises to the south near the Perm-Ekaterinburg Railroad. The Tura crosses the railroad near the village of Kooshva and pursues a northerly course of 35 miles until it meets the Iss. It then bears away 65 miles eastward to the town of Verkotoor, after which it swings around to the southeast and, crossing the boundary of the kingdom of Perm, flows past the well-known city of Tiumen and soon joins the Tobol River. The Tobol discharges into the Irtish, which empties into the Obi. The waters finally reach the Gulf of Obi and the Arctic Sea. The course of the Tura is in many respects similar to those of the Tulameen and Similkameen rivers of British Columbia, since all three flow north, northeast, and finally southeast. The productive platinum ground is found all along the Iss and the Veeya and on the Tura from its junction with these two streams as far as Verkotoor. The linear distance, therefore, is approximately 100 miles, and the general area is estimated at about 2,000 square miles.

Physiography.—In physiographic character the region is an old land area which has suffered protracted surface weathering and degradation. The drainage has reached a stage approximating a base-level or graded slope, and consequently the concentration of heavy minerals of all sorts, originally in a state of sparse dissemination in the country rock, has been extreme. This fact must be borne in mind in any comparison for economic purposes between the Urals and any other platinum region, such as, for example, British Columbia or the United States of Colombia. The rivers of the Urals appear to have been formerly larger than now, and the valleys are often choked and silted. The rivers meander, with many oxbows and cut-offs, across the level stretches.

Distribution of the platinum-bearing gravels.—Platinum is found in commercial quantity most richly along the Iss. The gravels are less rich along the Veeya and on the Tura. The two tributaries are undoubtedly responsible for the platinum in the Tura. The platinum is afforded by placers of the usual type, but on account of the former larger development of the drainage there are productive gravels away from the present streams and in abandoned channels which are more or less similar to those with which the gold seekers of our Western States are familiar. The productive ground extends, as a rule, to distances varying from 200 to 800 feet on each side of the present rivers. Along the broader parts of the Tura, Purington states that the total width of the productive ground may be half a mile, and that generally throughout the region he has obtained colors by panning, from the grass roots downward, but of course the richest streak lies nearest to the bed rock.

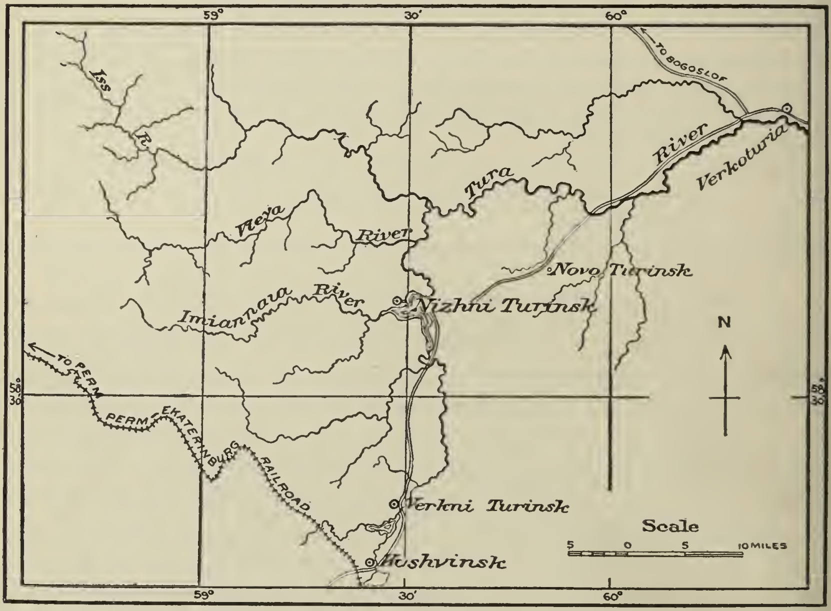

FIG. 5.—Sketch map of the platinum-bearing streams in the Goroblagodat and Bisersk districts, Russia. (After C. W. Purington.)

Hard geology.—The rock formations along the Iss and the Veeya are very suggestive of those in British Columbia, and the accompanying geological map (fig. 6), which is reduced from the valuable report of Prof. A. M. Saytzeff, will be useful for comparison with that earlier given for the Tulameen district. Near the headwaters of each stream are extensive outcrops of peridotite, which are associated with equally large areas of syenitic gneiss. There are smaller exposures of diorite, gabbro-diorite, and gabbro, all of which are represented by the same conventional sign on the map. Still farther downstream each creek passes into an area of porphyrites, within the limits of which are two associated exposures of Lower Devonian limestone. Beyond the junction of the Veeya and the Iss with the Tura the geology has not been colored on the map which accompanies Professor Saytzeff's report upon the platinum deposits, but the rock formations along the Tura seem to have no special connection with platinum, because the river derives all of its metal from its two tributaries. The fullest statement of geological details will be found in the paper by Professor Saytzeff, entitled Geological Investigations in the Nicholay-Pavdinsk district, which is subsequently cited in the bibliography. A brief outline, however, is here given regarding the several formations.

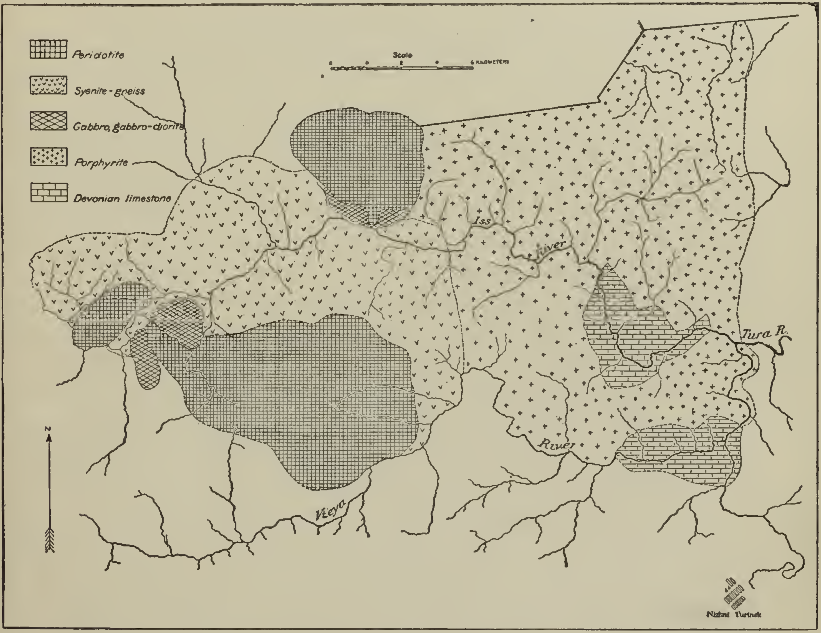

FIG. 6.—Geological map of the headwaters of the Iss and the Veeya rivers. (After a colored map by A. M. Saytzeff.)

The syenite-gneiss is, as a rule, coarsely crystalline and well foliated, but it sometimes exhibits a finely granular structure and may pass to massive types. In the coarse varieties the reddish feldspar and the dark-green hornblende can be readily identified. The rock is greenish gray in color and contains veins and nests of quartz.

Under the general name of peridotite a considerable variety of rocks is included, viz, peridotite, olivine-gabbro, olivine-diallage rock and rock composed chiefly of diallage, and serpentine. All of these are closely related and pass one into the other by transition. Similar ones occur likewise in the district of Nijni-Tagilsk.

The diorites, gabbro-diorites, and gabbros are all closely related to one another by transitions. Gabbro seems to have been the original from which the others have been derived by the metamorphism of the pyroxene to amphibole. The rocks also exhibit gnessoid structure at times.

The porphyrites are chiefly diabasic and uralitic.

In addition to the rocks mentioned, talc-schist has been discovered in the soil of one or two of the mines. The Lower Devonian limestone is a dark or light-gray variety, and in some places has a purple-red color. It is fine grained and has many veins of calcite, some of which contain cinnabar. Pebbles of cinnabar from the veins are found in the gravels together with the platinum where the limestone forms the bed rock. The dip of the limestone is steep, and the riffles and pockets formed by its passage across the creeks furnish some of the richest deposits. The limestone is penetrated by igneous dikes, which are thought by some observers to have a connection with the introduction of the cinnabar.

Mother rock of the platinum.—Professor Saytzeff has carried out some investigations in order to trace back the platinum to its mother rock. He concludes, from its association with chromite and with serpentine, that the peridotite is the chief source, but that the metal is present in the syenites and the gabbros. As regards the latter rocks the conclusions are based chiefly upon the association of the nuggets in some places exclusively with bowlders of these types. Platinum seems actually to have been found only in the bowlders of peridotite or its derived serpentine. Mr. Purington pounded up a sample of serpentine taken from the gravels and weighing about 20 pounds. He succeeded in panning scales of platinum worth about 2 cents from it. This would be equivalent to about $2, or from a seventh to an eighth of an ounce, per ton.

Placers.—The placers are of two varieties—those which are in the beds of the running streams and those which are now above water. The former seem to be chiefly dug by hand dredges, and, so far as the descriptions lead one to infer, wing dams, sluices, and the familiar contrivances of our Western States seem not to have been yet introduced. The gravels which occur above the rivers are worked throughout the district. On the land there is a general surface layer of peat or vegetable material called turf. Below this is a variable thickness of poor gravel, and then the pay streak is met. The overburden varies from

5 to 20 feet, and the pay streak is 4 feet and less. The overlying material is stripped off, and then the productive gravel is carted to the washers. Less frequently the productive gravel seems to be a saprolite, or crust of decomposed peridotite, as described by Professor Saytzeff. Gold accompanies the platinum in a very subordinate capacity. As is usual in our Western placers, clayey streaks give the best returns. Opposite the mouths of tributary brooks the platinum is often particularly rich. The valley of the Iss narrows and widens, and the best placers are found in the wider reaches, where the velocity of the stream becomes checked. Where there are hollows in the bed rock, more especially in the limestone, the concentration is often marked.

Fairly large bowlders are sometimes present along the Tura, but on the Iss they do not exceed 18 inches. Only the local rocks are represented by them, and, as a rule, they are but slightly rounded. The region has never been glaciated.

Mr. Purington gives some estimates of value which are based on statistics obtained from local authorities and from his own pannings. From the grass roots down, the gravels over the whole region will not yield over 40 cents to the cubic yard. Along the Upper Iss 63 cents is the estimated contents, and on the Lower Iss 65 cents, for an average of 10½ feet of gravel. Along the Tura the gravels, which are dredged in 7 feet of water, are estimated at 52 cents to the yard. These values would seem to be amply sufficient to afford a large margin of profit if, in other respects, the region is at all adapted to the methods of hydraulicking or dredging that have been developed in western North America.

In Professor Saytzeff's descriptions of the workings, many detailed cross sections of the gravels are given, together with pictures of the carts and washers. A description of the methods of working will also be found in Mr. Purington's recent paper, and those of the Nijni-Tagilsk region have been described and illustrated by Mr. G. F. Kunz and Prof. Henry Louis in papers to which reference will be subsequently made in the bibliography.

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GOLACHOVSKY. Description of newly described mines of platinum and gold: Mining Journal, 1826, Vol. VIII, p. 103. (Not accessible to writer.)

KOLTOVSKY. On the platinum mines in the district of Goroblagodat: Mining Journal, 1840, Part 1, p. 227. (Not accessible to writer.)

LÖSCH, A. Two specimens of native platinum from Bisersk: Trans. Royal Russian Min. Soc., St. Petersburg, Vol. XXVII, 1890, p. 440. (Not accessible to writer.)

PURINGTON, C. W. Platinum deposits of the River Tura: Trans. Am. Inst. Min. Eng., Vol. XXIX, 1899, p. 3.

SAYTZEFF, A. M. Geologic investigations in the Nicolay-Pavdinsk district and surrounding places of the Central Ural and the eastern slope: Mem. Russ. Geol. Commission, Vol. XIII, 1892, 97 pages, with a résumé in German. Reviewed in Neues Jahrbuch, 1895, Vol. II, p. 289.

SIVKOV. Geognostic description of certain parts of the Goroblagodat district, investigated in 1834 and 1835: Mining Journal, London, 1836, Part III, Vol. VIII, p. 225. (Not accessible to writer.)

STAHL. Gold und Platin in Nicolaje Pawdinsk (Ural): Chemiker-Zeitung, 1897, No. 40.

NIJNI-TAGILSK DISTRICT.

The productive ground in this district is found about 22 kilometers, or about 18 miles, south-southwest of Nijni-Tagilsk. Platinum occurs on both the eastern and the western watershed, but it is obtained more especially on the western. The streams head in Mount Soloviev. The Vissim, the Martian, and the Chansh (or Schaitansk) flow

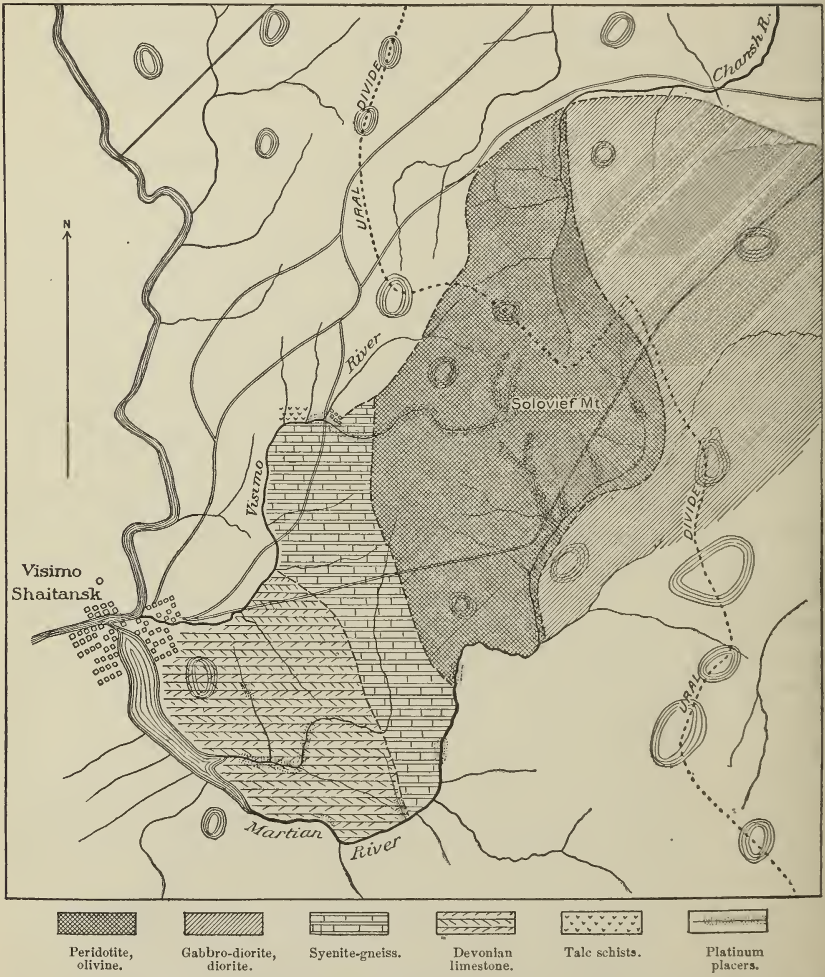

FIG. 7.—Geological map of the Nijni-Tagilsk platinum district. (After a colored map by A. M. Saytzeff.)

westward, while some of the headwaters of the Tagil, a tributary of the Tura, flow eastward. Mount Soloviev consists chiefly of peridotites, but it has associated with them the same gabbros, diorites, syenitic gneisses, and Devonian limestones which have already been mentioned under the northern district. The accompanying geological map, taken from Professor Saytzeff's paper, will give an idea of the geological relations. In their petrographic characters the rocks seem to be much the same as in the northern districts. The peridotite has, however, been somewhat fully described by Inostranzeff in connection with his investigations of the mother rock. A full translation of Professor Inostranzeff's paper is given on subsequent pages, and in it an outline of the peridotites will be found. The accompanying photomicrograph (Pl. VI, *C*) has been prepared from a specimen which was gathered in the region by Dr. G. P. Merrill in 1897, and which has been very kindly placed in the hands of the writer.

In connection with an investigation of the bowlders which had been observed to contain platinum, Daubrée has given an analysis of a specimen of the peridotite, as follows:

Analysis of peridotite from Mount Soloviev.

SiO_2	47.60
Al_2O_3	3
Fe_2O_3 and FeO	7.60
MgO	26
CaO	11.30
Loss on ignition	4.30
Total	99.80

Under the microscope it consisted of diallage, olivine, veins of serpentine, and chromite. Some small scales of platinum were noted in the rock.[a] It is interesting to compare this analysis with the analysis of the mother rock from British Columbia, p. 44.

In addition to the pocket of platinum-bearing rock which is described by Professor Inostranzeff, Prof. Henry Louis has mentioned a streak of serpentinized rock which was 6 feet wide and which was actually mined to a depth of 35 feet. It was crushed and washed, and yielded 15 dwt. per ton. Below 35 feet the values gave out.[b]

Placers.—As already stated, the placers lie mostly on the western watershed and are found over an area of about 80 square miles. They are similar in character to those described in the region farther north. The gravels are often from 30 to 40 or even 60 feet deep, and the pay streak lies upon the bed rock, and is 6 to 10 inches thick. Sometimes, however, another pay streak will be found part way down. The richest layers are somewhat irregular in shape and distribution. When next the bed rock they are usually attacked by shafts, from which the miners burrow out and through which they bring the gravels to the shaft and finally to the surface. The mining is done in the winter and the washing in the summer. The gravels are broken up by puddling machines and washed by being passed through sluices with riffles. A brief account of the methods of mining will be found in the paper by Mr. G. F. Kunz in the report on Mineral Industry of the Eleventh Census, page 341. The largest nuggets are obtained in this region, but the platinum is less pure than that gathered along the Iss. It is angular and of darker color and contains more iron, whereas along the Iss it is light colored, and is more apt to be in scales, especially when it is obtained at some distance from the mother rock. Many analyses of Russian platinum are given on pages 18–19.

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[a] Comptes rendus, Vol. LXXX, 1875, p. 707.

[b] The Mineral Industry, Vol. VI, p. 542.

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——— Platinum in diorite of the district of Nijni-Tagilsk: Mining Journal, London, 1863, Part III, p. 412. (Not accessible to writer.)

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KUNZ, G. F. Report on Mineral Industries: Eleventh Census of the United States, 1892, p. 341. A trip to Russia and the Ural Mountains: Jour. Franklin Institute, 1898, pp. 193 and 264.

LUBARSKY. Platinum mines in the district of Tagilsk: Mining Journal. London, 1828, Vol. XI, pp. 125–127. (Not accessible to the writer.)

TERREIL. Nickel-bearing platinum from Nijni-Tagilsk: Comptes rendus, Vol. LXXXII, 1878, p. 1116.

PRIMARY DEPOSITS OF PLATINUM IN THE URALS

By A. INOSTRANZEFF.[a]

Originally discovered in South America, platinum was brought to Europe in 1735,[b] and was recognized by Shaeffer as an element in 1752. Notwithstanding the fact that it was discovered so long ago, it has been extracted up to the present only from placers, and its original place of formation has been unknown. It is true that, as a mineral disseminated in hard serpentine rocks, platinum has been found in the mountains of Brazil and in the Cordilleras of North America,[a] but in such minute quantities that these discoveries could hardly be regarded as proving the original place of growth of the nuggets.

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[a] Reported at the meeting of the department of geology and mineralogy of the St. Petersburg Society of Naturalists, November 7, 1892. (Translated from the Russian.)

Table of Russian weights.

1 poud = 40 funts = 36 pounds avoirdupois.
1 funt = 96 zolotniks = 0.9 pound avoirdupois.
1 zolotnik = 96 dolei = 0.0094 pound avoirdupois.

[b] Dana, Mineralogy.

In Russia platinum was first found in the gold mines of Dakovlev in 1819,[b] later in the sands of Neviansk, Bilimbayevsk (1822), and Kuvshinsk factories (1824); and finally, in 1825, the richest Ural sands of the Sucho-Vissimsk works in the district of Nijni-Tagilsk were discovered.

According to Gustav Rose,[c] platinum occurs in the central and southern parts of the Urals, as well as in the northern, eastern, and western slopes. In the majority of places it is met in small quantities, associated with native gold. Only in the sands of the Nijni-Tagilsk works is platinum found in considerable quantity, and it is usually not associated with gold.

A study of Russian platinum has been made by many scientists, and a concise statement, enlarged by personal observations, may be found in an article by H. T. Koksharov,[d] in which he makes the following remarks: "The original place of deposition of platinum in the Urals has not been found as yet, but judging from the samples of native (virgin) platinum, in which can be seen adhering chromic iron, and sometimes, although seldom, serpentine, it should be sought for in the latter, as mentioned by Rose, because in serpentine chromic iron occurs in masses.

Daubrée,[e] in his experiments with the samples of the country rocks furnished him by Jaunez de Sponville from the mines of Tagilsk, found in them platinum associated with olivine, serpentine, and chromic iron. A close relation between the platinum of the sands and that of the rocks which contain olivine was determined by the same scientist in New Zealand, where the mines form a part of the Dun Mountains. This mountain is composed of a rock in which olivine predominates, and which was called "dunite" by Hochstetter. Daubrée observed a like relation of platinum sands to serpentine in the island of Borneo.

This summer I had occasion to travel in the Urals and to visit several places well known to geologists, among which were the mountainous district of Tagilsk, containing most interesting platinum mines. They are situated southwest of the Nijni-Tagilsk factory, along the rivers Vissim, Martian, and Chansh, on the western slope of the Urals. As has been known for a long time, the soil of the Tagilsk platinum mines, as well as a considerable part of the fragments found there, consists of serpentine and olivine rocks. There are also metamorphic schists and a peculiar conglomerate, which is developed in the neighborhood, consisting of fragments of serpentine and olivine rock and chromic iron, held together by a lime cement.

The platinum occurs in the sands in grains, and frequently in nuggets. [The largest found weighs 23.5 funts—21.15 pounds.] On washing the slimes, gold, iridium, and osmium are found.

The Tagilsk platinum mines are located along the rivers Vissim, Martian, and Chansh, which rise in the mountain Soloviev. The distribution of the platinum around about the Soloviev Mountain suggested long ago the advisability of searching in the mountain for its original source, but all prospecting has remained fruitless. At the time of my visit to the Tagilsk mines I had the opportunity of witnessing the discovery of the original place of deposition of platinum in the Urals. This discovery, like many others, was due to a laborer who had no license to perform any work there, but did it on his own account. Such persons are known in Siberia as plunderers or pillagers.

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[a] Mining Journal, 1891, Book III, p. 324.

[b] Minchin, Chemical analysis of the different kinds of Uralitic platinum: Trans. Min. Soc., Part II, 1842, p. 101.

[c] Reise nach dem Ural, dem Altai und dem Kaspischen Meere, Vol. II, 1837.

[d] Materials for the Mineralogy of Russia.

[e] Daubrée, Association de platine natif à des roches à base de peridot, Paris, 1876.

The manager of the platinum mines, Mr. Costenetzky, learned that in the northern part of the Soloviev Mountain such a plunderer was excavating the rock, and that this rock was being crushed and washed in a neighboring river. The plunderer noticed that he was being watched and ran away. It was therefore impossible to know whether he actually obtained platinum or anything else. This circumstance, however, led the manager to begin a reconnaissance of the locality. Through the kindness of the Tagilsk administration and Mr. I. A. Hamilton, some of the rock where the laborer had conducted his work was blasted with dynamite, and on the freshly formed surface could be seen the following: The massive rock in its fresh fracture appeared blackish green, with polyhedral jointings. The portions along the crevices were of a whitish-yellow color, and surrounded the cleavage planes like a band, giving the appearance of an altered mass of rock. In the place where the laborer conducted his work there was discovered a pocket, 35 cm. in diameter, which extended deep into the rock.

As compared with the native rock, this rock appeared, when fresh, to be of a less compact nature, and could be quite easily split to pieces with a chisel; but if left in the air it would harden. In some places this rock was very close to the altered surface of the native rock, while in others it was directly in contact with the fresh, unaltered country rock. Besides, between the pockets there could be seen separate small pieces of the native country rock. The rock containing the pockets consists principally of chromic iron, serpentine, and dolomite, the last named of which is in small quantities in the form of cement, and a still lesser quantity of opaline silica, which appears sometimes as a spheroidal mass.

In connection with the distribution of the serpentine and the chromic iron it may be noticed that they are frequently in layers parallel to the plane of contact with the neighboring country rock.

This method of distribution reminds one of the distribution of serpentine in some of the ophicalcites.

The country rock is of a finely granular texture, and in thin sections one may observe with a microscope transparent greenish grains of olivine, which largely make up the mass of the rock. The bands consist of rock partly unaltered and partly altered through the process of superficial change to the yellowish serpentine.

Under the microscope the wall rock exhibits crystallized grains of colorless olivine of varying size and with a characteristic shagreen surface. The grains were grouped so that, with the binding mass, they represented a hexagonal contour, and their outline resembled the section of a crystal of olivine. The mass that binds these grains together is a light-green serpentine, distributed in colored veins which have a foliated structure. Through the serpentine is disseminated a little chromic iron, which appears by reflected light to have a dull luster. It is more in evidence in places where some of the material crumbled out in preparing the sample for examination. The olivine predominates over the serpentine. In polarized light the olivine exhibits strong interference colors. Serpentine under the same conditions reveals a granular structure. But in some places one may detect with polarized light sporadic inclusions of grains of dolomite. In treating the substance with H_2SO_4 the acid dissolves a considerable quantity of iron and attacks the olivine, removing it and separating out an amorphous silica. In this reaction the serpentine loses its original color and is darkened, but the grains of dolomite are completely dissolved. Being guided by the principal component parts of the country rock of the Soloviev Mountain—that is, olivine and chromic iron—and considering serpentine as a product of the change undergone by olivine, one sees clearly that the serpentine has been derived from that variety of peridotite which is called dunite.

Comparing this rock with the real dunites of other countries, we see a material difference, viz, that the latter consist almost entirely of olivine, while in the former there is some serpentine, which has undoubtedly been produced from olivine by metamorphic processes, as is shown by the hexagonal section occupied by separate fragments of olivine all bound together by serpentine.

Such a rock might be called paleodunite; but we must not overlook the fact that in the olivine rocks several are connected by transition, and the decrease of one of the component parts in one rock may lead to its transition into the other. Thus the presence of enstatite makes a special variety, but it may decrease in amount almost to disappearance. Such a rock was described by Wadsworth[a] under the name saxonite, but Rosenbusch[b] did not accept the name, and renamed it harzburgite.

Nevertheless, the description of saxonite, furnished by Wadsworth and illustrated in Pl. IV, fig. 4, of his work, reminds us of the rock of the Soloviev Mountain, with only the difference that in the latter no enstatite was disclosed and there is considerably more olivine than in saxonite (harzburgite).

Under the microscope the rock with pockets appears to consist of many irregular angular grains of chromic iron, and to be fractured and have many cavities. The cementing material between the grains of chromite is chiefly serpentine, and in lesser quantity dolomite and opal, the last named sometimes in beautiful spheroidal masses. The last two minerals penetrate the crevices and cavities of the chromic iron.[c] In reflected light the chromic iron exhibits a weak, black, shining metallic luster; but no other minerals with a metallic luster can be seen. A few pieces of the rock (with pockets) could be observed, by means of a strong magnifier, to contain exceedingly fine grains or leaves of native platinum disseminated in the chromic iron. This search for it, by the way, was very difficult on account of the presence of the hollows in the seams of the chromic iron, which in a certain position before the light gave an exceedingly strong luster.

To determine the presence of platinum in the rocks (with pockets) in which the platinum could not be seen by means of a microscope, about 14 funts (5,733 grams) of it was taken from the place of blasting, crushed, and carefully washed. On obtaining the slime in the iron pan used in the washing, under the water there was observed a thin silvery band of native platinum, which was difficult to separate from the chromic iron by continuous washing on account of the danger of losing the fine microscopic leaves.

On examining the slime, even with a strong magnifying glass, no platinum was found. The examination was interfered with largely by the mass of angular grains of chromic iron, which possesses a strong, metallic, glassy luster, and by the size of the platinum, which was microscopically minute. The quantity of concentrates obtained in this experiment was 25 grams, and in order to find the chemically pure platinum, the following method was adopted. The concentrates were treated with aqua regia, the solution each time being evaporated to dryness on a water bath; the residue was then treated with sulphuric acid twice and again evaporated to dryness on a water bath. The residue was then treated with absolute alcohol, filtered, and to the clear solution was added solid ammonium chloride in excess. The solution was then slightly warmed and ammonium chloroplatinate precipitated. The precipitate was then filtered out and dried in the filter, ignited, and weighed in a porcelain crucible.[d] The platinum obtained was then treated with aqua regia, in which it dissolved completely, thus proving the absence of iridium. The solution was evaporated to dryness in a water bath, the residue treated twice with sulphuric acid, and again evaporated to dryness. After washing the residue, a few qualitative tests were made. A part of the solution was reduced by zinc, and chemically pure platinum was obtained. This was tested with platinum iodide, for the characteristic platinum reaction, and afforded a rose-crimson color.[a] In all, 0.0644 gram of chemically pure platinum was obtained from the slime, or considering the weight of the whole quantity of rock employed in this experiment (5,733 grams), it produced 0.00112 per cent of platinum.

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[a] M. E. Wadsworth, Lithological Studies, 1884, p. 125.

[b] Rosenbusch. Mikroskopische Physiographie, 2d edition, 1887, p. 269.

[c] H. J. Joss, who came at the time of my return from the platinum mines in Tagilsk, brought several samples of native rock to St. Petersburg. These samples were shown at the meetings of several scientific societies of the city.

[d] In all my experiments with platinum, no platinum apparatus of any kind was used. All solutions, ignitions, and weighing were made in porcelain apparatus.

Bearing in mind the fact that the platinum is found here in exceedingly fine particles, we might justly suppose that in the rough washing which was performed a part of the platinum was carried away by the water, and that the given figure is probably below the correct one. In order to obtain an accurate result, 500 grams of the rock was crushed and carefully mixed, and from this was taken 100 grams, which was treated twice with aqua regia. This solution was carefully evaporated to dryness on a water bath and the residue treated with sulphuric acid twice, with repeated evaporation. Then the residue of silicic acid was filtered out. The filtrate was again evaporated to dryness on a water bath and the residue dissolved in alcohol. Slightly warming this solution with chloride of ammonium, just as in the previous experiment, a precipitate of ammonium chloroplatinate appeared. This was collected on a filter, rinsed, dried, and by ignition converted into chemically pure platinum, amounting to 0.0103 gram, or 0.0103 per cent of the rock. This platiuum was treated qualitatively in the same way as that obtained from the concentrates.

From the same 500 grams of the crushed rock another 100 grams was taken and treated with aqua regia six times. In this operation 35 grams of the rock went into solution. The filtrate was separated first with an excess of sulphuric acid, then with water to dryness on a water bath. The solution in water, with the addition of a little sulphuric acid, was filtered from the precipitate. The platinum was reduced by zinc, collected on the filter, washed, and dried. The filter was then burned and the platinum weighed, amounting to 0.0111 gram, a quantity nearly the same as that obtained with ammonium chloroplatinate (0.0103 gram). Therefore the average amount of chemically pure platinum contained in the rocks may be taken as 0.0107 per cent.

Comparing the results of the last experiment with the determination of platinum in the concentrates, it is evident that in washing the crushed rock there was a loss of platinum, first because the water carried some away; and, secondly, for the reason that in 14 funts of the material used it was difficult to pick out only the rock with pockets. Some of the native olivine rock was present and thus reduced the percentage of the metal.

Rock containing platinum is found in the pockets, with dunite, although the metal occurs in an exceedingly fine state. Platinum is usually associated with other precious metals, such as gold, silver, iridium, osmium, etc., and the deposits in these mountain rocks are no exception to the general mode of occurrence. The amount of platinum is somewhat sporadically distributed, at one time enriching the accompanying rock and at another decreasing to complete disappearance. Of course we have a right to suppose that platinum is sporadically disseminated in its native rock, and it is possible that the laborer had already worked out that part of the pocket in which the platinum was not of microscopic size nor in sparsely distributed condition. This fact also points to the finding of platinum in the sand, in which it can be seen with the naked eye, disseminated in chromic iron. Of course the continuation of the investigation in the Soloviev Mountain must disclose such pockets, and it is not improbable that veins will be discovered in considerable number. It may be that in this rock (with pockets) will be found microscopic particles of platinum which can be extracted by washing, although now it can be extracted only by chemical means.

The place of discovery, at all events, contains a considerable quantity of the metal, and, expressing it in the ordinary way, it is 41 zolotniks to every 100 poods of rock. At the present time in the Tagilsk platinum mines rock is being worked which contains 2½–12 zolotniks per 100 poods.

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[a] Annales de Chemie et de Physique, 1832.

From further investigation we may expect some additional information to that reported by myself. But, in all events, 150 years had elapsed before the original place of deposition of platinum was discovered. Speculations, as expressed by different investigators, concerning this mountain rock which contains the precious metal, are now out of place. There is no doubt that the original source of platinum is peridotite, to which future investigations in the different parts of the Urals, one of the most interesting regions in the world, should be confined.

PLATINUM ELSEWHERE IN RUSSIA.

Platinum has been reported in a number of other places in the Russian Empire. Federov has mentioned its occurrençe, together with gold, in the extreme north of the kingdom of Perm, along the Loswe River and its tributaries. Syenitic gneiss seems to be the prevailing country rock.[a] Platinum is said to occur along the Ivalo River in Lapland, associated with diamonds and probably derived from a peridotite.[b]

Platinum is said to have been found in traces in the province of Baikal and Yenisei, Siberia.[c]

Palladium has been reported by T. W. Wilm in the gold-bearing sands on the south coast of the Black Sea. It is stated that it constitutes 8 to 10 per cent of the concentrates.[d]

Platinum is said by J. A. Phillips[e] to occur in small quantities in the auriferous quartz of the Beresovsk gold mines. Beresovsk lies a few miles northeast of Nijni-Tagilsk.

SPAIN.

One of the most interesting discoveries in connection with platinum was made early in the last century by the French chemist Vauquelin. He received a suite of ores from a silver mine at Guadalcanal, a few miles northeast of the Rio Tinto district, Seville. The ore resembled tetrahedrite closely, and on analysis was found to contain copper, lead, antimony, iron, sulphur, silver, and sometimes arsenic. It was associated with a gangue of calcite, barite, and quartz. The platinum proved to be variable, reaching at times 10 per cent and again being present only in traces. The same was true of the silver.[f] The silver mines of Guadalcanal are situated north of the city of Seville. The country rock is mica-shist, and the mines were formerly very productive, but are now of little importance.[g]

This discovery of platinum in a mineral containing copper, together with antimony and sometimes arsenic, and in an undoubted vein, is extremely interesting and important. Reference may be here made to the additional occurrence of platinum with tetrahedrite in the Alps and the neighboring parts of France, as is described under "France," p. 65. The similar occurrence of platinum in the form of sperrylite in the Sudbury region of Ontario may be likewise mentioned in this connection, and the ore at the Rambler mine, Wyoming.

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[a] Mineralogisches aus dem nördlichen Ural, by E. V. Federov: Tschermaks mineral. Mittheil. Vol. XIV, 1894, pp. 85, 143.

[b] A. E. Nordenskjöld, Poggendorffs Annalen, Vol. CXL, 1870, p. 336.

[c] Notice explicative sur la carte minéralogique de la Siberie (prepared for the Paris Exposition, 1900), p. 10.

[d] T. W. Wilm, Russ. Phys. Chem. Gesell., St. Petersburg, March, 1893.

[e] Treatise on Ore Deposits, 2d edition, pp. 545-546.

[f] Notice sur l'existence du platine dans les mines d'argent de Guadalcanal en Estramadura: Annales de Chemie, Vol. LX, 1806, p. 317.

[g] Ore Deposits, by J. A. Phillips, 1896, p. 493.

AFRICA.

ALGIERS.

The only mention of platinum in Africa that has been met by the writer is a brief note by G. Aimé upon an occurrence of galena at a place called La Bouzaria, a few miles from the city of Algiers. The communication was made to the French Academy and the sample was handed to MM. Berthier and Becquerel for verification of the reported presence of platinum, but the results of their assay have not been found.[a]

ASIA AND THE EAST INDIES.

BORNEO.

Platinum was discovered in 1831 in the gold washings of Goenoeng Lawack, southeastern Borneo. The gravels occur in a hilly country. Their bowlders are diorite, syenite, copper, and fragments of quartz, which are mingled with a sand of quartz and magnetite. They range from several feet to several fathoms in thickness, and toward the coast are buried beneath marshes. Cinnabar is said to accompany the grains. When analyzed, samples afforded the following results:

Analyses of platinum nuggets from southeastern Borneo.

	1	2	3
Pt	70.21	71.870	82.60
Ir	6.13	7.920	.66
Rh	.50	1.286	----------
Pd	1.44		
Os	1.15	.480	.30
Au	3.97	----------	.20
Fe	5.80	5.866	10.67
Cu	.34	.430	.13
Iridosmine	8.83	8.430	3.80
Hg	----------	.658	----------
Fe_2O_3	1.13	.420	----------
Cu	.50	----------	----------
Insol	----------	2.240	----------
Loss	----------	.400	----------
Total	100.00	100.000	98.36

NOTES TO TABLE.

1 and 2. Bleekrode, Platinerz von Borneo: Poggendoff's Annalen, Vol. CIII, p. 656. Platinerz von Goenoeng Lawack auf Borneo: Idem, Vol. CVII, p. 189.

3. M. Bocking, Liebig's Annalen, Vol. XCVI, 1855, p. 243.

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[a] Mineral de plomb sulfuré d'Alger, by G. Aimé: Comptes rendus, Vol. VII, 1838, p. 246.

The Fe_2O_3 and Cu mentioned at the end of the analysis were insoluble in HCl.

The following microscopic minerals occur with the platinum grains: Topaz, zircon, ruby(?), diamond, quartz, and feldspar, but no ilmenite.

According to L. Horner the gravels occur in the drainage area of the Banjermassing River, which rises in the Ratoos Mountains. The mountains consist of serpentine, diorite, and gabbro. A red clay lies at their bases and contains the gravels which hold the gold and platinum. The platinum is to the gold as 1 to 10, but at the time of Horner's observations it was thrown away. He estimates that 10,000 ounces were being lost yearly (1842).[a]

BURMA.

Platinum has long been known as an associate of gold in the placers that are washed near Ava, in Upper Burma. The locality does not, however, appear to be commercially productive.[b]

JAPAN.

In a catalogue of the minerals of Japan in the collection of Mr. T. Tsunashiro for the Paris Exposition platinum and iridosmine are reported as occurring in grains in the sands of the river Yubari, Ishikari.

AUSTRALIA AND OCEANIA.

NEW CALEDONIA.

Scales of platinum have been observed in the gold-bearing sands of Andam Creek, below Boudé.[c]

NEW SOUTH WALES.

Platinum has been discovered in several localities in New South Wales. The one which first attracted attention is in the northeastern corner of the province, on the seacoast, between the mouths of the Richmond and Clarence rivers. For many years the sands have been washed for gold. More or less platinum occurs as well, and from time to time a few ounces have been saved. It is, however, of no great economic importance.

In 1889 platinum was discovered in some peculiar deposits near Broken Hill, the famous lead-silver camp, in the extreme western part of the province. In the course of a few years the matter was carefully investigated, more particularly by Mr. J. B. Jaquet. In the platinum-bearing localities the country rock consists of schists, gneisses, and quartzites, all of which are highly altered sediments of Lower Silurian age. They have been penetrated by dikes and bosses of granite and very basic diorite. Some serpentine likewise occurs within 6 or 7 miles. The platinum has been detected in a very peculiar ferruginous deposit, which is similar to the gossan of the normal vein. These gossany outcrops are irregular and never extensive. They cap the altered sediments and eruptive rocks alike, and no definite law of distribution can be detected, but at times they certainly are situated at the junction of a compact and a more loosely textured rock. As they are followed down, the ferruginous character diminishes, and the deposit passes into ferruginous clays, and these into granules of silica cemented with kaolin, or into kaolin itself. Decomposed feldspathic rock ensues, which may represent either gneiss or a portion of a granite dike. There are no defined walls. The platinum-bearing rock passes gradually into the others. The platinum occurs distributed through the decomposed material, but more abundantly in the clays and kaolins than in the iron cap. Shafts have been sunk to a depth of 20 feet, and many assays have been made. The yield is extremely variable, but it may be said to range from an ounce and a half down to a quarter of an ounce or less per ton. Copper has been met in some of the outcrops, but no traces of copper pyrites or other iron or copper sulphide ores have been found.

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[a] L. Horner, Poggendorff's Annalen, Vol. LV, 1842, p. 526. In Beck's Erzlagerstätten there is cited a paper by T. H. Posewitz, Das Diamanten-Vorkommen in Borneo: Jahrbuch K. Ungar. Landesanstalt, Vol. VII. It is not accessible to the writer.

[b] J. Prinsep, Poggendorff's Annalen, Vol. XXXIV, 1835, p. 380; A. Faber, Pharmac. Centralblatt, 1848, p. 569.

[c] Pelatan, Les mines de la Nouvelle Calédonie, Paris, 1892, p. 53. This citation is quoted from A. Lacroix, Mineralogie de France, Vol. II, p. 390.

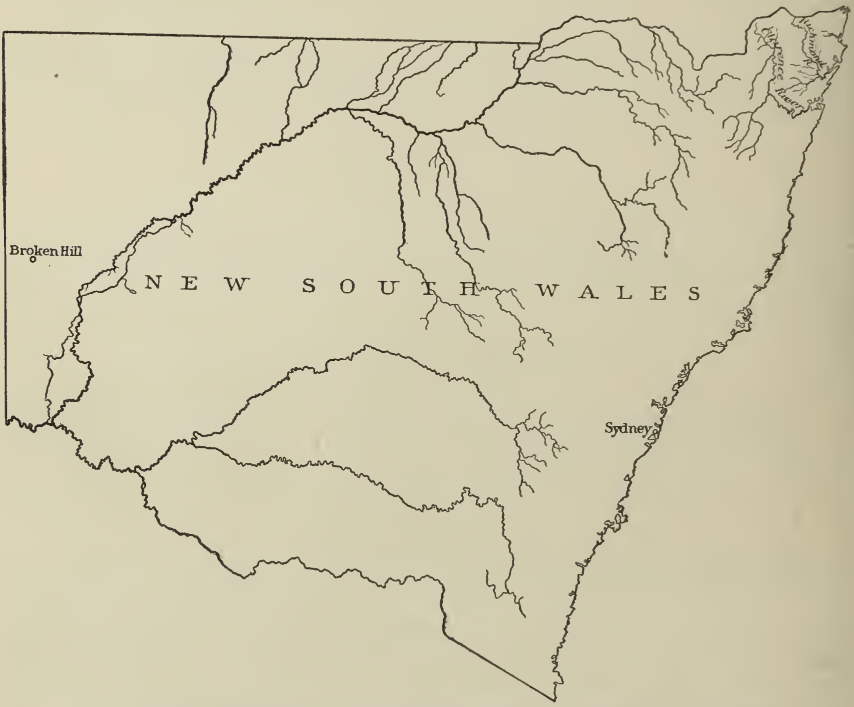

FIG. 8.—Sketch map of New South Wales, showing the distribution of platinum.

No platinum has been detected by the eye. It is so extremely fine that it is known only by assay. Mr. Jaquet states that there is no analogy between these deposits and well-defined lodes. He concludes that they have been produced by springs, which issued at one time where the deposits are now found. Iron, copper, and platinum were thus probably carried to the surface. The iron and copper were precipitated by the oxidizing action of the atmosphere, but the platinum was absorbed by the clays and kaolin. Platinum is not known, however, beyond a few feet in depth.

This occurrence is a most extraordinary and interesting one, and proves beyond question that platinum is not limited to placers, nor, indeed, to basic igneous rocks. If Mr. Jaquet's conclusions are correct it would certainly seem to be demonstrated that platinum circulates in solution. Some years after the above discovery platinum was found in commercial quantity in the deep placers of Fifield. The country rocks at Fifield are Silurian and Devonian. Silurian slates have been penetrated by diorite, which consists of hornblende, plagioclase, and accessory sphene and quartz. One gold-bearing reef has been located in the diorite. The gold and platinum bearing gravels form a lead from 60 to 150 feet wide, which extends for a little over a mile. They are covered by 60 to 70 feet of loam, with occasional bands of barren quartz conglomerates. The platinum and gold occur as small waterworn grains in crevices in the bed rock and in the few inches of sand just above it. The nuggets range up to 5 dwt. It

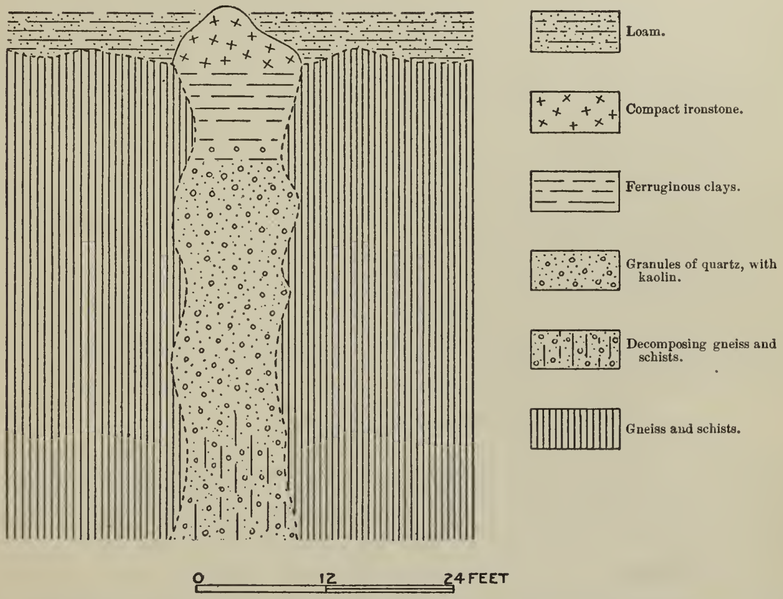

FIG. 9.—Geological section of the platinum deposit near Broken Hill, New South Wales. (After J. M. Jaquet.)

is thought by Mr. Jaquet that the platinum and gold have been concentrated from the neighboring conglomerates, which are supposed to be Tertiary.

Platinum has also been discovered as a rare mineral in a few additional gold washings in the colony.

For a general list of papers bearing upon the economic resources of New South Wales, see the bibliography prepared by W. S. Dun, which has been published in the Records of the Geological Survey of New South Wales, Vol. VI, Part IV, pp. 183–357. For platinum, see more especially pp. 312–314. In this place only the more important papers will be mentioned:

On the beach sands, see the Records of the Geological Survey of New South Wales, Vol. IV, Part I, page 25; also Proceedings of the Royal Society of New South Wales, Vol. XXVI, p. 368. Brief notices appear in the Annual Reports of the Department of Mines and Agriculture.

On the deposit near Broken Hill, see J. B. Jaquet, Report of the Department of Mines and Agriculture for 1892, p. 143, and the Records of the Geological Survey of New South Wales, Vol. V, 1896, p. 33. An abstract appears in Zeitschr. für prak. Geologie, 1893, p. 322.

On the Fifield deposits, see G. W. Card, Records of the Geological Survey of New South Wales, Vol. IV, p. 130; also J. B. Jaquet, Report of the Department of Mines and Agriculture, 1895, p. 181, and Records of the Geological Survey of New South Wales, Vol. V, p. 34.

Attention should be directed at this point to the remarkable occurrence of platinum in Australian coals which is described earlier in this paper (p. 35). It is not known to the writer from which one of the colonies the coal was obtained.

NEW ZEALAND.

Platinum has been found over a considerable area in New Zealand almost entirely in connection with the gold washings. It occurs in the eastern part of Middle Island, on the Cluthe River, and in a few gold districts of the Nelson region in the northern part of Middle Island. Iridosmine is frequent in the latter. It was noticed in this district by von Hochstetter. Some small scales of iridosmine were brought back by him from the Takaka diggings. The occurrence of the metal in this district is of extreme interest when taken in connection with the country rocks of the Urals and of British Columbia. As is well known, Baron von Hochstetter discovered in the Dun Mountains, near Nelson, the very peculiar rock, consisting of olivine and chromite, which he named dunite. It is almost exactly the same in mineralogical composition and texture as the chief mother rock which has been found in the other two platinum districts just cited.

One other interesting feature of the New Zealand gravels is the occurrence of bits of nickel-irons in association with the platinum. Like it they appear to be excessively basic segregations in igneous rocks. In the Zeitschrift für praktische Geologie for June, 1898, p.

222, a stray paragraph appears in which it is stated that in the Nelson district of New Zealand platinum has been found in an eruptive rock near the Takaka River. The eruptive breaks through limestone and the quantity is not commercial, but further particulars of the original source of the statement are not given.

Cox, S. H., Notes on Mineralogy of New Zealand; Trans. New Zealand Institute, September to November, 1881.

Hamilton, W. S. On platinum crystals in the iron sands of the Orepuki gold field: Trans. New Zealand Institute, Vol. XVIII, p. 402.

Hochstetter, F. M. Geologie von Neu-Seeland, Vol. I, 1864, p. 212.

TASMANIA.

Within the last few years the iridosmine which has been discovered in the gold placers of western Tasmania has assumed commercial importance. The need of osmium for certain forms of incandescent burners had brought these placers into notice. Montgomery states that a good deal of platiniridium and iridium is obtained along the Savage River, having probably been derived from the serpentine which is known upstream. Platinum itself is reported from the Wilson River, and osmiridium, containing, however, very little osmium, from parts of the King River gold field and the Salisbury field, near Beaconsfield. The original matrix has not been discovered.[a]

CONCLUSION.

A careful review of the facts set forth in the preceding pages makes it possible to establish the following types of ore deposits and mineralogical associations for the platinum group of metals.

I. Placers.—The platinum has been mostly derived from peridotites, but also in less degree from pyroxenites, gabbros, metamorphosed gabbros (now dioritic rocks), and syenites, often gneissoid.

Geologists have long appreciated the importance of the peridotites, but have not generally realized that, in a minor degree, the syenites are also of wide distribution and that they likewise deserve emphasis. Thus, for example, they are recorded in the Urals, in Colombia, Brazil, and British Columbia.

II. Veins.—Platinum or palladium has been observed in veins in connection with gold at Tilkerode in the Hartz; in Minas Geraes in Brazil; at Santa Rosa in Colombia; and at Beresovsk, Russia. Whether the platinum or palladium is or is not associated in these localities with other metallic sulphides, such as are mentioned below, does not appear from the incomplete records.

The peculiar deposit at Broken Hill, New South Wales, may be mentioned in this connection, although it differs from the type.

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[a] A. Montgomery, The Useful Minerals of Tasmania. (The statements are taken from a reprint kindly sent the writer by the author; but although evidently from some scientific society, it bears neither date nor reference.)

Platinum as a subordinate component in complex antimonial sulphides of copper and other metals (i e., tetrathedrite and bournonite) occurs in veins at Guadalcanal, Spain, and probably also in veins in the Val du Drac and elsewhere in eastern France. While this association is as yet only of mineralogical interest, it nevertheless shows that platinum *can* occur in this way, and makes it desirable that similar ores be tested where found.

Sperrylite occurs with covellite at the Rambler mine, Wyoming.

III. Platinum disseminated in eruptive rocks.—The platinum occurs in two forms. The first is the arsenide, sperrylite, which is associated with copper-nickel ores in uralitized norites, at Sudbury, Canada. The mother rock of the North Carolina sperrylite has not yet been fully described and interpreted. Platinum in polydymite may be mentioned as a corollary to the Sudbury occurrence.

In the second form the platinum in the native state is contained in basic eruptives, more especially peridotites. The platinum is frequently involved in a very intimate way with chromite. In the most natural interpretation of the phenomena the two minerals are regarded as having crystallized in the normal passage of the fused magma to the solidified condition. It should be clearly stated, however, that two views have long prevailed regarding chromite. Its deposits which are large enough to mine are so uniformly in serpentine, and are so often of such great extent, that the chromite has been believed by some to be a product of metamorphism. Its masses are supposed to be segregations which have resulted from the change of anhydrous chromium-bearing silicates to the hydrated form, with attendant separation of chromic oxide.[a]

On the other hand, chromite has been looked upon as a true igneous mineral; it has been discovered in basic eruptives, not in the least changed to serpentine; and it has therefore been believed to be, even when in serpentine, an unaltered survivor from a previous anhydrous magnesian eruptive.

In the one or two cases in which platinum has been discovered in quantity in the country rock (on Mount Soloviev, Nijni-Tagilsk district) it has certainly been associated with an altered and serpentinized or even carbonated form of peridotite. It is fair to raise the question whether the presence of the platinum is in any way connected with this excessive alteration, or whether the change happened to take place where the platinum was previously abundant. In the Tulameen district A. W. Johnston and the writer have found platinum in serpentinized belts along dislocations, but many belts have also been tested which gave no platinum. In these occurrences the platinum is so excessively fine that evidence is not easily attainable as to its relations to the mother rock. In the present state of our knowledge it might be possible to develop an argument not easy to refute, that the platinum in these surroundings had entered in solution or had been deposited in connection with the secondary changes, and yet from a study of many nuggets and from very careful and detailed observation of the peridotite on the Tulameen, it is the writer's belief that the platinum is, in far the greater part, a true igneous mineral. This belief rests upon the following grounds:

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[a] A brief review and discussion of this difference of opinion, together with citation of authorities, will be found in the writer's Ore Deposits of the United States and Canada, 1900, p. 413.

1. Some nuggets contain the platinum associated with perfectly fresh olivine, and the relations are precisely those of two minerals which have crystallized from fusion and of which the platinum is the older. Had there been any secondary introduction of platinum, so sensitive a mineral as olivine would have shown some signs of change.

2. The platinum and chromite can be satisfactorily explained, as regards their relations, on the basis that the chromite is a slightly older mineral, which has become involved in and with the platinum, and that the latter has crystallized a little later. That the period of the much more abundant chromite has lasted into that of the rarer platinum, or even longer than it, is quite possible, because of the influence of the principle of solution. Chromite is somewhat more infusible than native platinum,[a] as has been shown experimentally by the writer's friend, A. W. Johnston. Nuggets of associated chromite and platinum have been placed before the oxyhydrogen blowpipe, and the platinum has been fused to globules and beads upon the still unaffected chromite, which, however, finally slagged over. No mineral in a fused magma can crystallize out at a temperature above its fusing point, although its elements or ions may be held in the molten mass, because of phenomena of solution, at a temperature considerably below its fusing point under the conditions of pressure prevailing at the time. It is therefore quite reasonable that chromite should have first begun to crystallize, and that around centers thus set up platinum should have later separated out, and should even have entirely inclosed chromite or have been itself inclosed by the continued growth of the chromite. In this way the structures shown in the drawings of nuggets given on a previous page can be satisfactorily explained. That, however, the platinum and chromite which, perhaps in a very finely divided state, have thus once formed may have later passed into solution and have become segregated and concentrated is not to be denied, but, so far as the writer can learn, our knowledge of the chemical relations of the two elements is so limited that the nature of such solution and precipitation can not be outlined.

Iridosmine is invariably involved in a mechanical way with the platinum, and it also occurs as a separate mineral. Iridosmine is excessively infusible, and because of this character it probably crystallized before the platinum and then became mechanically involved in the latter. When now found free it probably formed amid surroundings where little or no platinum was present.

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[a] It must be remembered that the so-called native platinum is not the pure metal, but an alloy of predominant platinum with other metals of the group and with never-failing and important iron, minor copper, and frequent gold, all of which affect the fusibility.

When platinum is observed associated with olivine and free from chromite, it is probable that in this portion of the magma there chanced to be little or no chromic oxide, just as, vice versa, we repeatedly find chromite and no platinum.

J. H. L. Vogt, in one of his valuable and suggestive papers, has outlined a course for the crystallization and separation of the platinum somewhat different from the one here given.[a] Vogt had his attention specially focussed on the iron in the platinum and iridosmine, and endeavored to place the latter two in line with the terrestrial and meteoric irons of various kinds. In the present discussion attention is fixed upon the phenomena of the chromite, platinum, and iridosmine as presented in their actual occurrences. Vogt, consequently, considers the iridosmine as the culminating stage in the separation of the platinum group, whereas the writer regards it as the first development and the forerunner.

Stanislas Meunier has taken a quite different view regarding the origin of the platinum as well as of terrestial irons, of magnetite, chromite, and even of other metallic minerals. A. Inostranzeff has remarked the irregular shape of some of the Russian platinum and its lack of crystal form as observed in the mother rock. Professor Meunier lays great emphasis upon this character, and draws analogies between it and the relations of certain magnetites, chromites, and terrestial and meteoric irons to their associated silicates. The metallic minerals are described as ramifying throughout the other silicates and as even penetrating their cleavage cracks in such a way as to support the inference that they are of later origin than the silicates. Professor Meunier then states that by introducing volatilized chlorides of iron, nickel, platinum, etc., together with hydrogen, into a porcelain tube heated to redness and containing fragments of pyroxene, olivine, or rock, he is able to deposit the metals or alloys of several metals in the interstices in such a way as to imitate closely the natural occurrences. By varying the gases he can make magnetite, chromite, and even silicates. He therefore concludes that the native platinum has been brought in, presumably in a similar manner, and has been deposited so as to yield the nuggets.[b]

While it is of great interest to know that the single metals, their alloys, and even the silicates can be deposited in this way, yet crystallization from fusion appeals to the writer as equally competent to bring about the observed results and as having much greater claims to probability and therefore to general confidence.

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[a] Compare Zeitschr. für prak. Geologie, July, 1893, pp. 267-268.

[b] A summary of much previous work by Professor Meunier is given in the Comptes rendus de la VII Session, Congrès Géologique International, p. 157.

One or two final conclusions of practical value may be drawn in closing this paper.

1. Experience thus far gained leads to the conclusion that platinum is very sparsely distributed in its mother rock and that the chances of finding it in quantities sufficient to mine are small. There is, nevertheless, a chance. If found, the recovery of the platinum by any means other than stamping and washing remains to be solved, and as the metal may be in a very finely desseminated state, this problem is a serious feature of the situation.

2. Large and permanent placers are to be looked for only in very old land areas which have been subjected to protracted degradation and concentration.

3. In the assay of antimonial, arsenical, and other copper ores, but especially of tetrahedrite (gray copper or fahlerz), it is worth while to look for small percentages of platinum.

4. Deposits of chromite deserve similar testing.

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